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Original Articles

UNIOCULAR INFLAMMATIONS OF THE OPTIC NERVE AND RETINA.*

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Ophthalmologic text-books are nearly or quite silent in regard to uniocular inflammation of either the optic nerve or retina, and the cases reported in ophthalmologic literature are not numerous.

Galezowski[1] was, perhaps, the first to assert the unilateral occurrence of certain forms of retinitis, followed later by reports of cases by Henry Power,[2] Jonathan Hutchinson,[3] Leber,[4] and by others, occasionally, up to the present time. A. Yvert[5] and others have reported cases of uniocular retinitis due to albuminuria. Retinitis resembling that of albuminuria, but limited to one eye and without albuminuria, has been seen several times. Williamson,[6] Manchester, England, found five cases of uniocular retinal changes (hemorrhages and inflammation) in thirteen cases of cerebral vascular lesions. In all but one of these cases the retinal disease was on the side opposite to that of the brain lesion. In 1886 Dr. Hughlings Jackson[7] said that he had seen three cases of uniocular optic neuritis in hemiplegics, the neuritis being on the side opposite to the cerebral lesion. Several cases of uniocular optic neuritis have been seen in connection with orbital inflammation and tumor of the same side or with disease of a contiguous sinus (De La Personne,[8] Peuch,[9] Brailey,[10] and others). Königshofer[11] reported a case of uniocular optic neuritis which disappeared only after the removal of adenoid vegetations. Single cases of uniocular optic neuritis attributable to various remote causes have been reported by Henry Eales,[12] Henry Juler,[13] Charles Higgins,[14] L. Werner,[15] and by others. Dr. de Schweinitz,[16] in 1896, reported five cases of uniocular optic neuritis in patients with histories, respectively, of rheumatism, syphilis, chlorosis, albuminuria of pregnancy, and degenerative changes in the vessels of the optic nerve. C. G. Lee[17] has reported "four interesting cases of monocular optic neuritis" in which it was impossible to attribute the inflammation to any of the causes usually given. Nettleship[18] has collected, under the head of "unilateral retro-ocular optic neuritis," twenty-eight cases "characterized by failure of sight limited to one eye, often accompanied by neuralgic pain about the temple and orbit, and by pain in moving the eye." In these cases, he says, "acute inflammation seems to take place in some part of the course of the optic nerve." The same class of cases has been referred to by Leber,[19] by Hoch,[20] of Vienna, and by others.

While this list of references is not complete, it suffices to show that the recorded cases of this kind are by no means numerous. My own clinical observations on this subject, therefore, may be of some interest. They extend over the past fifteen years and include eighteen cases. These cases are here described in more or less detail, varying according to the facts noted when the consultations were made. Unfortunately, these are, in some cases, rather meager, for at the time I had no intention of publishing them. I trust, however, that my experience will at least serve the purpose of directing professional attention more earnestly to this subject.

I shall arrange my cases into three classes; first, those of uniocular optic neuritis; second, those of uniocular neuro-retinitis, and third, those of uniocular retinitis.

UNIOCULAR OPTIC NEURITIS.

CASE 1. Optic neuritis in left eye; mild, duration short, mild recurrence, recovery.

Patient.—Miss M. S., Batavia, N. Y., aged 16, is a well developed, healthy girl from a well-to-do family. She menstruates regularly and without pain, and has no abnormal condition of the urine. She consulted me on March 9, 1893, complaining of not seeing as well as usual with her left eye, and of seeing "black spots before her eyes." This condition had existed about two weeks.

Examination.—This gave vision of the right eye 5/5 Snellen, left eye 5/15. There were several scotomata in the visual field of the left eye. With the ophthalmoscope the right fundus was seen to be perfectly normal, while the left showed a distinct picture of mild optic neuritis. The optic disc was slightly obscured and a little swelled. The retina near the optic disc was edematous. There were no retinal hemorrhages or exudates.

Treatment.—She was given iodid of potash internally, and on April 8 the vision of the left eye, like that of the right was 5/5, and the optic disc appeared clear and normal.

Recurrence.—May 5, 1894. Miss S. had a recurrence of the old trouble in her left eye, which she felt during the past week. The optic disc was again slightly inflamed, with the same appearances as those of nearly a year before. Vision was reduced to 5/25. The urine was normal, and the patient seemed to be healthy. She was again given potassium iodid and rapidly recovered. The eye has remained well since that time.

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* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. L'Union Médicale, Paris, 1864.
2. Royal London Ophth. Hosp. Rep., London, vol. vii, 1871.
3. Royal London Ophth. Hosp. Rep., London, vol. viii, p. 44.
4. Graefe-Saemisch Handbuch, first edition, 1877, vol. v.
5. Recueil d'Ophth., March, 1883.
6. Brit. Med. Jour., June 11, 1898.
7. Ophth. Rev., vol. v, 1886, p. 24.
8. Arch. d' Ophth., vol. xix, p. 513.
9. Jour. de Med. de Bordeaux, April 5, 1891.
10. Ophth. Rev., vol. vi, 1887, p. 24.
11. Ophth. Klinik., January, 1901.
12. Trans. Ophth. Soc. of the United Kingdom, vol. v, 1885, p. 126.
13. Trans. Ophth. Soc. of the United Kingdom, vol. xiv, 1894, p. 121.
14. Lancet, April 22, 1899, p. 1083.
15. Trans. Ophth. Soc. of the United Kingdom, vol. xxv, 1905, p. 98.
16. Phil. Polyclinic, Dec. 12, 1896.
17. Brit. Med. Jour., vol. i, 1902.
18. Trans. Ophth. Soc. of the United Kingdom, vol. iv, 1884, p. 186.
19. Graefe-Saemisch Handbuch, first edition, vol. v, p. 829.
20. Hirschberg's Centbl., April, 1884.

CASE 2.—Optic neuritis in right eye, rather severe, duration eight months; recovery with vision equal to 5/6.

Patient.—On April 27, 1902, Mrs. F. M., Olean, N. Y., aged 28, was referred to me by Dr. C. S. Bull, of New York, with a letter in which he said: "Mrs. M. has an optic neuritis of the right eye, with engorged veins, but not much infiltration, and no signs of 'choked disc.' The vision was 20/40 in this eye, and normal in the left eye. She has a hypermetropic astigmatism of slight degree in both eyes. There were no retinal hemorrhages. There was no limitation of the visual field, and no scotoma present, either for form or color." He prescribed "mixed treatment."

History.—Mrs. M. is a well-nourished, healthy-looking young woman of medium height and weight, and with a history of no continuous headaches, or recent sickness of any kind. She has one healthy child. She has had no urinary or kidney affection.

About four weeks before her first visit to me, she noticed a confusion of vision in reading, and found that the vision of the right eye was not as good as that of the left. She at once consulted an ophthalmologist in Buffalo, but afterward went to New York and consulted Dr. Bull, who reported to me the condition quoted above, together with an analysis of the blood and urine, which were normal.

Examination.—On April 27, 1902, the date of the first visit to me, the right pupil was dilated with atropin sulphate solution. The vision without a lens was 5/30; and with + 1.D. sph., 5/20, and not further improved by any cylindrical combination. Ophthalmoscopic examination showed nearly the same appearance as described by Dr. Bull: optic disc slightly "woolly" and swelled, its outlines obscured, and the vessels dilated and abnormally tortuous. There were a few minute hemorrhages near the disc, but no exudates of the retina.

The fundus of the left eye was absolutely normal, and the vision of this eye was 5/4, nearly.

Treatment.—Dr. Bull's treatment was continued, except that the instillations of the atropin sulphate solution were omitted. The patient was advised not to use the eyes, and to protect them from the light by colored glasses.

May 8: The effects of the atropin solution in the right eye were nearly gone. Vision was 5/20, also with + 1.D. sph., that of the left eye was 5/4, minus. The same internal treatment was continued.

May 24: The appearances of the right optic disc and surroundings were improved. Vision was the same as before, 5/20.

July 2: Inflammation of the right optic disc was much less. Hemorrhages of retina had become absorbed, leaving no visible lesions. Vision was 5/15.

There was a steady improvement of the neuritis of the right optic nerve until Dec. 12, 1902, when it was nearly clear in its outlines, and of good color. At this date the vision was 5/6.

Feb. 9, 1903. The record says: "Fundus of right eye is perfectly normal. Vision is 5/6, plus." Treatment was suspended.

Aug. 11, 1903, also Feb. 27, 1906. There was, perhaps, a slight "roughness" of the outlines of the right optic disc, but it was apparently normal in color, certainly not pale, and the vision was 5/5, nearly. There were no lesions at the macula lutea. The left fundus remained normal, and vision of this eye was 5/4. There was slight astigmatism in each eye. The urine has never been abnormal, and the patient seems in perfect health. There is no history of syphilis. The only complaint is an occasional headache.

CASE 3.—Optic neuritis in right eye, considerably severe, duration six months; recovery with slight pallor of the disc, and vision 5/6.

Patient.—A. B. P., Buffalo, N. Y., a man of medium size and weight, aged 43, married, had always enjoyed good health, and has had neither syphilis nor albuminuria. He was brought to me by Dr. John Mesmer on Jan. 27, 1905. About fifteen days before, while reading, his right eye began to give him pain and the vision of that eye also became quite dim. He consulted Dr. Dennett of New York, who examined him carefully and referred him to me with a chart of the visual field of the right eye taken January 18, showing that it was very much narrowed, except directly outward, and with a note stating his diagnosis of optic neuritis of this eye.

Examination.—My own examination with the ophthalmoscope showed a typical picture of optic neuritis of the right eye, disc swelled and outlines obscured, and the vessels considerably engorged. There was no special involvement of the retina, and there were no retinal hemorrhages. I found the visual field much contracted, except directly outward. Vision was 5/15. As stated above, the patient's general health was good, except that he was "very nervous." There were no symptoms of brain or spinal cord disease. The pupil of the right eye was of the same size as that of the left, and responded normally to light.

The left eye was normal in every respect, and the vision was 5/5.

Treatment.—Dr. Dennett had prescribed strychnia, gr. 1/60, three times a day. I advised the substitution of moderate doses of potassium iodid.

Result.—I did not see the patient again until June 21, 1905, when, in consultation with Dr. H. C. Buswell, I examined him again. At this time the optic disc had entirely cleared up and the color was apparently normal, possibly a trifle more pale than the left optic disc. The vision was 5/6. The visual field had not materially changed since the last visit. The left eye continued normal both in structure and vision.

Remarks.—Dr. Buswell, Dr. Mesmer and I were unable to find a sufficient cause for the uniocular optic neuritis in this case. Dr. Dennett believed the cause to be arteriosclerosis, but Dr. Buswell decided that there was no arteriosclerosis, and in this he says he was supported by Drs. Edward Janeway and Herman Knapp of New York, after a thorough examination.

CASE 4.—Retro-ocular optic neuritis in left eye, very severe, blindness for nine days, duration six months; recovery, disc pale, color sense impaired, light sense diminished, vision 5/7.

The following case has been reported[21] under the title of "Hysterical or Functional Blindness." I am convinced, however, that it belongs to the class of uniocular retrobulbar optic neuritis described by Nettleship and referred to above. I, therefore, take the liberty of reproducing it here.

Patient.—Miss J. H., Angelica, N. Y., aged 18, consulted me on March 16, 1897.

History.—She stated that on March 9 she was seized with pain in the left eye, which extended over the left side of the head and into the left ear. This was so severe as to require anodynes for its relief. In three days it had nearly disappeared. Soon after the onset of the pain, the vision became affected and on the next day, March 10, it was very "foggy." On awakening on the morning of the third day, March 11, she found that the vision of this eye was lost, she not being able to distinguish even light with certainty. An ophthalmologist in a neighboring town was consulted and after examining her gave a diagnosis of "retinal thrombosis." He prescribed treatment which was followed for a few days without improvement. Her father, who was a physician, became anxious, and desiring further advice, brought her to me.

Examination.—External examination of the eyes showed them to be alike in appearance, and their movements were normal. The pupils were normal and equal in size, but the reaction to light was a little slower and less complete in the left eye than in the right, there being a slight dilatation when exposed alone. There was manifest hypermetropia of 0.5 D. sph. in the right eye, with vision 5/4. The vision of the left eye seemed entirely lost. Careful ophthalmoscopic examination of the left fundus (the pupil being dilated with homatropin solution) showed no pathologic change whatever. There were no obstruction in the retinal circulation or change in the vessels, no edema, discoloration or hemorrhage of the retina, and no changes of the optic disc. Tension was normal. The patient complained of some headache, a "weakness" of the eye, and general weakness. I ventured the opinion that the case was one of so-called functional blindness, but suggested that another opinion be obtained; accordingly, on the next day, March 17, my friend, the late Dr. F. W. Abbott, examined the patient most carefully with the same result that

21. Trans. Amer. Ophth. Soc., 1897.

I had found, except that he thought there was a slight engorgement of the retinal veins.

Treatment.—Dr. Abbott suggested that a leech be applied to the left temple, and that the patient be kept quiet in a darkened room for a few days. This was done, and five grains of potassium iodid were given three times a day. Later strychnin, 1/60 gr., was given three times a day.

Course of Disease.—March 19. There was a distinct perception of light, and she could see the movements of my hand.

March 20. She counted fingers held in the peripheral part of the visual field with difficulty.

March 28. She read 1/60 eccentrically.

April 3. Vision equaled 5/60, eccentrically. Ophthalmoscopic examination showed fundus normal as before. Patient returned home with directions to continue essentially the same treatment as before.

April 15. Examination showed that the vision had increased to 5/9, and Jaeger No. 6 slowly at 10 inches.

Her vision gradually improved and in June she was able to read No. 1 Jaeger with some difficulty. The optic disc was abnormally pale, the color sense was somewhat impaired, and light sense was diminished.

In February, 1906, I again saw this patient and found the vision of her left eye to be 5/7. The disc appeared a trifle pale, and the color sense and light sense were still somewhat impaired.

About two years previous to this attack she had had malarial fever, but fully recovered from it and has since enjoyed good health. She had no uterine disorders or trouble of any kind.

UNIOCULAR NEURORETINITIS.

CASE 5.—Neuroretinitis in left eye, severe, duration over a year, loss of vision, neuroretinal atrophy. General health fair, evidence of general arteriosclerosis.

Patient.—Mrs. E. E., a farmer's wife, aged 61, presented herself to me through the advice of the late Dr. H. D. Ingraham, on October 13, 1892.

History.—The sight of the left eye had been failing for about a year. There had been no pain in the eye or head, but in addition to the failing vision, there had been a great deal of photopsia in this eye—"flashes of light and shooting stars." Centrally the vision was destroyed, but beyond about 10 degrees, throughout the visual field, she could count fingers.

Examination.—Examination with the ophthalmoscope showed swelling of the optic disc, with indistinctness of outlines, diffused haziness of the retina, engorged retinal veins, and tortuosity of both the retinal veins and arteries, and numerous retinal hemorrhages near the optic disc, and several smaller ones farther away. At the macula lutea, and also inside and below the optic disc, there were several whitish spots of considerable size.

The vision of the right eye was not as acute as formerly, and equaled 5/18. There was no inflammatory process in the fundus of this eye. The vessels, however, were diminished in size.

Treatment.—This woman's health was not good and there was some evidence of arteriosclerosis. The kidney secretion was normal, and there was no albumin in the urine. She was put on moderate doses of potassium iodid.

Course of the Disease.—On November 12 the optic nerve and retina of left eye were still much inflamed. There was no fundus inflammation of right eye. The same treatment was continued.

March 17, 1893. The left optic disc and retina were still much inflamed and there were whitish spots below and to the inside of the optic disc.

Aug. 9, 1902. The retinal hemorrhages and exudates had disappeared, and the optic disc had become atrophic. The vitreous humor was somewhat hazy. Vision was a little more than perception of light. The vision of the right eye was still poor, but there were no fundus lesions to be seen.

CASE 6.—Neuroretinitis in left eye, considerably severe, duration six months, restoration of vision, no visible lesions remaining, segmental scotoma. Purulent inflammation of right kidney, with some albumin, followed by recovery.

Patient.—R. W., Friendship, N. Y., aged 24 a patient of Dr. H. C. Buswell, applied to me for advice on Dec. 7, 1897, regarding impairment of vision in his left eye, which he had noticed for about three weeks.

History.—I had examined his eyes two or three times before for hypermetropia, and aside from this error they had been normal, vision being 5/5 in each eye, both without glasses, and with +1.75 D. sph.

The patient was somewhat debilitated from a purulent inflammation of his right kidney from calculi, with occasional discharge of small quantities of pus and blood with the urine, in which there was some albumin and casts. There was an entire absence of symptoms of brain or spinal cord disease. He had occasional headaches, as he had done all of his life, and lately there had been some pain in the left eye.

Examination.—At this visit the vision of the right eye was 5/5, with +1.75 D. sph., that of the left was 5/24, also with +1.75 D. sph. Ophthalmoscopic examination showed quite severe neuroretinitis in the left eye. The right fundus was normal.

Treatment.—The patient was put on potassium iodid in moderate doses, and the intraocular inflammation steadily improved until, on March 29, 1898, when the record states that the whitish inflammatory exudates had entirely disappeared, and the vision was 5/5. There was a faint scotoma in the outer part of the visual field. The right eye had remained healthy.

Course of Disease.—Feb. 20, 1905. He has had no further eye trouble. The vision of each eye is 5/5, with a slight scotoma in the outer part, near the center of the visual field of the left eye. No fundus lesions could be seen with the ophthalmoscope in either eye, and the left optic disc is of normal color.

The patient's kidney affection has apparently been cured, and his general health is good.

CASE 7.—Neuroretinitis in right eye, very severe, duration eight months, loss of vision, except at periphery of visual field, neuroretinal atrophy.

Patient.—Mrs. S. D. Buffalo, N. Y., consulted me on Dec. 18, 1903, complaining that she had not been seeing as well "lately" with her right eye as with her left.

Examination.—She is a strong, healthy, hard-working woman, and is the mother of several healthy children, still living. With the right eye she could count fingers at two or three feet, no better with glasses. Vision of the left eye with +2.25 D. sph. was 5/5. The ophthalmoscope showed the right optic disc obscured. The retinal vessels were very tortuous and much engorged, and scattered throughout the retina were many large and small hemorrhages. The fundus of the left eye was entirely normal, and there was no evidence of retinal arteriosclerosis.

The patient had, apparently, a normal heart. The arteries did not seem to be atheromatous.

Course of Disease.—The retinal hemorrhages were gradually absorbed in the course of six or eight months, and pronounced optic nerve and retinal atrophy supervened, leaving a large dense scotoma in the central and inner part of the field of vision, while at its periphery the patient could count fingers, better at the upper and outer parts.

The left eye remains normal, with supernormal vision.

CASE 8.—Neuroretinitis in right eye, severe, duration eight months, resulting in loss of vision centrally, but not entirely peripherally; neurorctinal atrophy. Chronic albuminuria, arteriosclerosis.

Patient.—W. H., Buffalo, N. Y., aged 65, merchant, had been a patient of mine since March 6, 1899, when he consulted me for change of glasses for presbyopia. He had worn glasses for near work, but thought he needed stronger ones. He had occasional headaches.

Examination at this time showed the vision of each eye to be 5/4, also with +0.25 D. sph. The muscle test with a Maddox rod gave orthophoria. I ordered glasses for near work, R. and L. each, +2.75 D. sph. The ophthalmoscope showed both fundi normal.

Later Condition.—Sept. 17, 1901. He continues to have headaches, though he has the general appearance of being in good health. He works hard in his business, mostly at the desk. He denies having any illness, although his professional friends tell me he has Bright's disease. I found the vision and

the fundi of his eyes as before—normal. Changed glasses for near work to R. and L. +2.25 D. sph.

Course of Disease.—April 16, 1904. He complained that the vision of the right eye had been failing for about two weeks. He had not been well for a long time, and was being treated for "kidney trouble" by Dr. Woehnert of Buffalo. He had had a great deal of headache, sometimes very severe, and there were some albumin and casts in the urine. At this visit the vision of the right eye was 5/60—a little better eccentrically, while that of the left eye was 5/4, nearly all the letters. The ophthalmoscopic examination showed pronounced neuroretinitis in the right eye, the optic disc being abnormally reddened and somewhat obscured, the retina hazy, the retinal vessels tortuous, and to the temporal side and above the optic disc there was a small flame-like retinal hemorrhage; near the macula lutea there were two or three small, whitish exudates. The visual field was concentrically contracted, and there was also a central scotoma.

The fundus of the left eye was perfectly normal in every respect.

Consultation.—The patient consulted Dr. William Osler of Baltimore and Drs. Edward Janeway and Herman Knapp of New York, who agreed with Dr. Woehnert as to the diagnosis of albuminuria with general arteriosclerosis.

The neuroretinal inflammation gradually subsided in the course of three or four months and atrophy followed. The vision never improved, but with the atrophy of the optic nerve, became reduced to the counting of fingers at two or three feet, eccentrically. With the subsidence of the inflammation also, all traces of retinal hemorrhages and exudates disappeared. There was not the appearance of albuminuric retinitis at any stage of the neuroretinal disease; neither did the retinal vessels show ophthalmoscopic evidences of arteriosclerosis.

The left eye remained normal, both in vision and in structure, till May 20, 1905. At this time the patient was attacked by an excruciating headache, which lasted three or four days. During this time there was much congestion of the ocular circulation, involving both the choroidal and retinal vessels of the left eye. A small hemorrhage in the left vitreous humor took place, and the left optic disc became reddened and hazy. No other fundus changes could be detected. Vision was reduced to 5/9 on May 27. Under general treatment and rest in a darkened room the fundus cleared up in the course of from three to four weeks, vision was restored to 5/6, and the optic disc and retina regained their normal appearance.

Termination of Case.—The patient died on Dec. 8, 1905, from uremia. Immediately before death the right eye was nearly blind from atrophy of the optic nerve, following the neuroretinitis, and the left eye was normal.

Remarks.—While the left eye was temporarily involved in an exaggerated hyperemia at one time, I believe the case should be regarded as one of uniocular neuroretinitis, following the typical course and stages of inflammation, with swelling, edema, hemorrhages, exudates and subsequent atrophy.

UNIOCULAR RETINITIS.

CASE 9.—Retinitis, right eye, severe, duration and result unknown. Evidences of arteriosclerosis.

Patient.—Mrs. M. M., Wright's Corners, N. Y., aged 65, consulted me on March 19, 1891.

History.—She had been under the treatment of Dr. Kittenger of Lockport, N. Y., for trouble with her eyes. The vision of the right eye had been getting dim for two months and was growing worse. Her health was good and there was no urinary or brain disease. There was, however, evident arteriosclerosis.

Examination.—Vision of the right eye was 5/60, and with +1 D. sph. it was 5/36. The ophthalmoscope showed numerous retinal hemorrhages above and to the outside of the macula lutea. The retinal vessels were also congested and abnormally tortuous, and the retina was edematous. No exudates were seen, and the optic disc was normal.

The vision of the left eye was 5/9, and with +1 D. sph. it was 5/5. The fundus of this eye was normal.

Remarks.—This woman was referred back to Dr. Kittenger for treatment, and I have not seen her since.

CASE 10.—Retinitis in left eye, mild, duration a year and a half; recovery with scotoma upward and inward, vision 5/6. No kidney or other disease, except "very nervous."

Patient.—Mrs. B. Van T., Union, N. Y., aged 49, has been "very nervous and poorly" for a long time.

History.—She has been an eye patient of Dr. Michael of Binghamton, N. Y., and was referred to me by Dr. Simmons of Susquehanna, Pa.

Her first visit to me was on Sept. 15, 1897. Her eyes had been "weak" for a long time, but on July 7, 1897, she found that the vision of the left eye had become much worse, being most dimmed upward and inward in the visual field. She consulted Dr. Michael, who told her that there were hemorrhages and other changes in the retina of that eye, and asked her to have her family physician, Dr. Simmons, examine her urine. This was done without finding anything abnormal.

Examination.—On her first visit to me she said that there had been pain over the left eye, and that she was "weak and nervous." The vision of the right eye was 5/5, also with +0.25 D. sph. That of the left was 5/60, better eccentrically, by turning the eye upward and inward; not improved by glasses.

Under homatropin, vision was the same as above in each eye, and the right fundus was normal. The left optic disc was quite normal in appearance, but the retina was a little edematous, with several whitish exudates below the macula, and a little toward the nasal side, and still farther downward there was quite a large retinal hemorrhage, which seemed to be fading.

Treatment.—I referred her to her family physician for treatment, with the suggestion that she be given potassium iodid.

Course of Disease.—Oct. 10, 1898. The retinal lesions were less pronounced, and the vision was improved.

May 16, 1899. All exudates and hemorrhages have disappeared in the left eye, and vision eccentrically was 5/6. Right vision and fundus were normal.

March 5, 1906. There had been no recurrence of the retinal disease of the left eye, and both fundi appeared normal. There was no paleness of the left optic disc. Vision in the left eye continued to be 5/6. The scotoma in the left visual field upward and inward remained, although less pronounced.

Her general health was somewhat improved, but she still "had no endurance and tired easily." There was no heart disease, nor was there apparent arteriosclerosis. Urine was normal.

CASE 11.—Retinitis in right eye, mild, duration over one year; recovery, vision 5/7, with small scotoma above, but near the center of the visual field.

Patient.—H. B. S., Buffalo, N. Y., aged 26, unmarried, is doing clerical work and examining records in the county clerk's office. He is a young man of good health and habits, and has no evidence of urinary or heart disease.

Examination.—He consulted me on Jan. 21, 1899, stating that he had not been seeing as well as usual for the past two or three weeks with his right eye. Vision of this eye was 5/60, not improved by spherical or cylindrical lenses, and objects seemed distorted. The visual field was blurred near the center. Vision of the left eye was 5/6. After dilating the pupils with homatropin the opthalmoscope showed the retina of the right eye edematous, with a whitish exudate of considerable size at the macular region, and very small ones lower down. The optic disc was clear, but considerably reddened. The fundus of the left eye was normal.

Treatment.—The patient was given moderate doses of potassium iodid.

Course of Disease.—On January 23, vision of right eye was 5/24; on February 11, it was 5/15; on March 27, it was 5/12. On the latter date an ophthalmoscopic examination of this eye was again made under the influence of a mydriatic, when it was found that the exudate at the macula was smaller and had become somewhat pigmented. There were also a few small pigmented dots around it. No faded choroidal areas.

Aug. 2, 1900: Vision of right eye was 5/9, and the retinal exudates were scarcely observable. Objects still appeared more or less distorted. The left eye continued normal.

On March 20, 1903, vision of right eye was worse—5/15;

left was 5/5 +. The right eye under mydriatic showed the lesion around the macula to be diminished, but there was another whitish exudate of smaller size below and to the nasal side of the macula. The patient was again ordered to take five-grain doses of potassium iodid three times a day.

April 24, 1903: The eye was better. From this time the vision of this eye continued to be about 5/12, but the retinal exudates were gradually dispersed till on March 2, 1906, none could be found. On the latter date the patient was re-examined under homatropin for glasses, when the right eye took — 0.50 D. sph. ⌒ + 1.75 D. cyl. ax. 90, giving vision 5/7; left eye — 0.25 D. sph. ⌒ + 1.50 D. cyl. ax. 90, vision 5/5 +. There was still slight distortion of objects as seen with the right eye, and small scotomata above, but near the center of the field of vision.

CASE 12.—Retinitis in right eye, pronounced, duration over six months; result unknown.

Patient.—F. R. P., aged 53, attorney, married, came to me on April 8, 1904, complaining that the vision of his right eye had been more or less impaired for two years.

Examination.—At this time vision was 5/15, not improved by glasses, and objects looked distorted. The vision of the left eye after correcting refractive error with — 0.75 D. cyl. ax. 165, was 5/4. After dilating the pupils the ophthalmoscopic examination showed, in the right eye, several yellowish-white exudates around the macula, and a fading retinal hemorrhage above it and inward. The retinal veins above the macular region were unusually tortuous. The optic disc was normal. The record notes say: "The whole appearance is suggestive of albuminuric retinitis." The fundus of the left eye was perfectly normal. The urine was afterward examined several times by an expert, and never showed any evidence of kidney disease. The patient had no arteriosclerosis, and seemed in good health every way. He was ordered to take potassium iodid.

Course of Disease.—The patient was seen again on Nov. 23, 1904, but his eye was no better. Vision was 5/30. I have not seen him since.

CASE 13.—Retinitis in right eye, mild, duration six months or more; recovery, vision 5/7, slowly. Occasional albuminuria, but chronic nephritis not conclusive.

Patient.—H. A. W., Buffalo, N. Y., a patient of Dr. Earl P. Lothrop, consulted me on Sept. 28, 1904, for a dimness of vision of his right eye, which had been troubling him for several days. He was a man 56 years old, tall and stout and had been "poorly" for several months. He said that he had had "kidney trouble" for a long time, and that at times there had been a little albumin in his urine.

Examination.—He was wearing glasses, — R. + 1.25 D. sph. and L. + 0.75 D. sph., with + 2.50 D. sph. added in bifocals. With these distance glasses, vision was R. 5/30, L. 5/6. Right vision was not improved by other lenses, but the left with + 0.50 D. sph. ⌒ + 0.75 D. cyl. ax. 150, vision = 5/5. Both pupils were of the same size, and responded equally to light. There was a marked central scotomata in the visual field of the right eye. Ophthalmoscopically, the right optic disc was slightly hazy, and there were several retinal hemorrhages and three yellowish-white exudates discernible at the macular region.

The fundus of the left eye was normal in every respect. I may add here that both eyes were under the influence of a mydriatic (homatropin) while making the ophthalmoscopic examination.

Course of Disease.—Oct. 1, 1904. Vision of right eye was 5/9, with + 1.25 D. sph. lens.

Jan. 16, 1905: Vision of the right eye was 5/7, with + 1.50 D. sph. The retinal hemorrhages had disappeared, but there remained a single, small whitish exudate near the macula lutea. The left eye continued normal.

The patient was last seen on Dec. 20, 1905, when the vision was found to be 5/7, with + 1.50 D. sph., right eye, and 5/5 (half), with + 0.50 D. sph. ⌒ + 1.50 D. cyl. ax. 160, left eye. The pupils being dilated with homatropin, the right eye, as well as the left, showed no retinal or optic nerve abnormalities.

CASE 14.—Retinitis in right eye, severe. Seen but once.

Remarks.—This case is one that I take the liberty of recording, although my information in regard to it is quite scant. It was that of a man about 50 years of age, who was presented, in 1904, to the Buffalo Ophthalmological Club by one of its members. The patient had been losing sight of his right eye for several weeks without pain. The vision of the left eye, he said, was good. The ophthalmoscope showed a typical retinitis with numerous hemorrhages scattered throughout the retina and tortuous vessels in the right eye. The fundus of the left eye was normal.

Patient.—The patient was a laborer and was a strong, healthy-looking man. He had no organic disease of the heart or any apparent symptoms of arteriosclerosis or of brain or spinal cord disease.

CASE 15.—Retinitis in left eye, severe, duration over six months, passing into atrophy; vision perception of light. Poor health, mostly "digestive troubles," arteriosclerosis.

Patient.—Mrs. J. M., Orchard Park, N. Y., aged 63, was referred to me by Dr. Hunt on Sept. 30, 1905.

History.—She had been in poor health for the past two or three years, mostly with "digestive troubles" and general weakness. She had no organic disease of the heart, but radial arteries were "hard."

Examination.—The vision of the left eye had been failing for the past two or three months, and was now a little more than perception of light. The right eye had vision of 5/6, with — 1 D. sph. ⌒ + 1.75 D. cyl. ax. 90. The ophthalmoscope showed severe inflammation of the retina of the left eye, with distended, tortuous retinal vessels, and many "flame-like" hemorrhages of various sizes scattered throughout the retina. The fundus of the right eye was normal. Atrophy of the optic nerve was taking place later.

CASE 16.—Retinitis in left eye, mild; still in progress, and under observation.

Patient.—G. P., Buffalo, N. Y., photographer, aged 68.

History.—He has been in fairly good health for years. He has no organic disease of the heart, kidneys or brain. There was some arteriosclerosis. He has never had syphilis.

Examination.—Feb. 10, 1906. Glasses for near work do not seem comfortable. Examination with the ophthalmoscope showed both fundi normal. V. R. 5/6, and with — 0.37 D. cyl. ax. 100, it was 5/5. V. L. 5/9, and with — 0.50 D. sph. ⌒ + 0.75 D. cyl. ax. 15, it was 5/5, half. Adding + 2.75 D. sph. to these gave distinct vision in each eye for Jaeger 1 at 13 inches. These I ordered for near work.

Course of Disease.—On February 20 he returned to me, saying that for the past three days the vision of the left eye had been quite dim, and horizontal lines seemed to be "broken and tipped down to the right." He had no trouble with the right eye. On examination the vision of the left eye was reduced to 5/30, and the ophthalmoscope showed several minute retinal hemorrhages at the macula, and slight retinal edema. The optic disc was normal. The right fundus was normal.

Treatment.—Potassium iodid was prescribed in moderate doses, to be taken three times a day.

Course of Disease.—March 6: Vision of the left eye was better, and there was less distortion of lines and letters.

April 4: Vision of left eye was worse, being less than 5/60. Objects seemed more distorted, and there was a central scotoma of considerable size. The ophthalmoscope showed an enlarged retinal hemorrhage at the macular region. He had an idiosyncrasy against potassium iodid, but I urged him to take all he could.

Patient is still under treatment.

CASE 17.—Retinitis in right eye, quite severe; still under observation; valvular disease of heart, has had symptoms of cerebral hemorrhage, no kidney disease.

Patient.—V. M. H., Buffalo, N. Y., salesman, aged 58, married; on the advice of Dr. DeWitt C. Green, consulted me on March 20, 1906.

History.—He complained that for the past few days he had not been seeing well with his right eye, which had always been his "good eye," the other having had poor vision from childhood, being astigmatic in considerable degree. The patient had not been in best of health, and since the spring of 1904, when he seemed to lose control of the muscles of his lower extremi-

ties. On Sept. 20, 1904, he was accidentally tripped by a dog and fell to the ground, striking on his right elbow, but not on his head. The fall, however, caused much muscular incoordination and "confusion of mind," which lasted for several months. After this fall he was also troubled for four months with "half vision," but he does not remember on which side. There has been some valvular disease of the heart for at least two years, but no kidney disease. At present the patient has occasional dizzy spells and pain in his head, not definitely located.

Examination.—He is now wearing glasses which seem to correct his refractive error properly, R. + 1.25 D. sph. and L. + 2.75 D. cyl. ax. 125 for distance, with + 2.25 D. sph. added for near. With these the distance vision of the right eye, which had heretofore been 5/5, was 5/15; that of the left eye 5/20, which was as good as it has ever been. On dilating the pupils the ophthalmoscope showed a pronounced retinitis of the right eye, localized above and to the temporal side of the optic disc. There were four or five retinal exudates of considerable size near each other, and a few smaller ones adjoining. There was one large retinal hemorrhage between the exudates and the optic disc, and numerous smaller ones surrounding the exudates. The optic disc appeared perfectly normal. The visual field was not contracted, but there was a scotoma near the center of the field, downward and outward, and objects looked distorted. The fundus of the left eye was perfectly normal. The vision of this eye was congenitally amblyopic.

The patient is still under treatment with potassium iodid.

CASE 18.—Retinitis (macular) in right eye, single exudate at macula, duration three months to date, central scotoma, vision 5/60; still under treatment.

History.—On April 7, 1906 (just as I am concluding this paper), Mrs. M. A. S., aged 60, consulted me for impairment of vision of right eye, which had troubled her for the past three months, but which for the past two weeks had been worse. She was wearing glasses, R. and L. + 1 D. sph., with which she says her vision had been perfect in each eye. With the right eye she had, during the period named, seen a "black spot" in the central part of the visual field, round in shape, and at fifteen feet about "eighteen inches in diameter." The patient's general health was good in every respect, and there has been no history of albuminuria.

Examination.—Vision was 5/60, a little better eccentrically in any direction. Vision of the left eye was "clear" and with + 1 D. sph. was 5/6, but with + 1.50 D. sph. it was 5/5. There was no pupillary disturbance in either eye, and in both eyes tension and all external appearances were normal. After dilating the pupil there was seen with the ophthalmoscope a small, whitish, retinal exudate at the macula lutea of the right eye, but in every other respect this fundus was entirely normal. There was no pigmentary change, no retinal hemorrhage, and the retinal vessels and optic disc appeared normal. Nothing abnormal could be found in the left eye.

Remarks.—I am disposed to regard this case as one of "macular" retinitis, if I may be allowed to use the term, the minute exudate being the result of an inflammatory process as real as though it were more extended and attended by hemorrhages, other exudates and vascular changes. These changes may take place later in the progress of the case, which I shall watch with interest.

At present the condition is uniocular, and I assume it will remain so after the three months which have now elapsed.

These observations, although purely clinical, and also more or less imperfect, serve my purpose of showing that, at least so far as my own experience goes, uniocular retinal and optic-nerve inflammations are not as rare as ophthalmologic literature would lead us to believe. If my case-records were minutely searched I am sure that several other cases would be found. If I were to suggest the number of these cases proportionate to the number of eye patients of all kinds seen it would be about 1 to 1,000.

A summary of these cases shows that the optic nerve was inflamed in four of them, in three of which it was intraocular, and in one retroocular. Of the four cases three were females and one male, with ages varying from sixteen to forty-three years, and all were apparently in good health. The right optic nerve was affected in two cases and the left in two. Recovery followed in each, with normal, or nearly normal, optic disc, and normal, or nearly normal, vision.

In four cases the inflammation involved both the optic nerve and retina, two being females and two males, of ages varying from twenty-four to sixty-seven years, only one being under sixty-one. In two the inflammation was in the right eye and in two in the left. One patient's general health was good, one had calculi and inflammation of the right kidney, one had questionable general arteriosclerosis together with chronic albuminuria. The vision of the affected eye was practically lost by atrophy in three cases. It was regained and became nearly normal in one.

In ten cases the inflammation was apparently limited to the retina. It varied greatly in intensity. Four of these patients were males and six were females. The right eye was affected in seven, the left eye in three. Three cases, which were mild, terminated in recovery without leaving perceptible lesions and with vision nearly normal. In one the vision of the affected eye was lost, while in the other six the result is either unknown or the disease is still in progress. As regards the general condition, it was noted to be healthy in six. In three there was some arteriosclerosis, one of these patients having also occasional albuminuria. In one case there had been symptoms of slight cerebral hemorrhage together with valvular heart disease.

Thus, it will be seen that it is difficult to place any etiologic relation between these inflammations and any other specific disease. One-sided nephritis was present in one case; more or less arteriosclerosis existed in five patients, two of whom also had albuminuria; in one of these it was occasional and in one chronic; valvular disease of the heart together with a previous cerebral hemorrhage was found in one, while the rest of the eighteen were classed as healthy and without cerebral, vascular or kidney disease.

I desire to add in conclusion that in quite a large experience of a quarter of a century in ophthalmology I have never seen a case of optic neuritis that was not uniocular, except when there was syphilis or brain tumor. I have never seen a case of neuroretinitis or of retinitis that was not uniocular, except when there was double orbital cellulitis, Bright's disease, diabetes mellitus or syphilis, and then it was typical of these diseases, and even in two albuminuric cases and one of nephritic inflammation, the inflammation was uniocular. I do not insist that this must have been the experience of others.

My treatment has almost invariably been the administration of potassium iodid. I believe that it has proved beneficial in some of the cases. In others it seemed to be of no benefit.

212 Franklin Street.

DISCUSSION.

DR. EUGENE SMITH, Detroit, remarked that he long since became convinced that the apparent silence on the part of text-books and journals concerning the matter was only relative. He fully agreed with Dr. Hubbell that these cases are decidedly more common than we have been led to suppose, judging from our books, although the books of many years ago spoke of the condition. Last week he had four cases under observation of uniocular neuroretinitis. One, a man of 32 years, with rheumatism. There was choked disc, central scotoma and inflammation of the retina. Another case was specific in character. Another was a woman with a two

months' old baby. He had seen the same condition from brain tumor and from Bright's disease. He thought the silence on the part of the journals and text-books with regard to the condition was relative. Experience has thoroughly demonstrated that causes which produce the binocular will also produce the uniocular inflammations.

DR. J. T. HERRON, Jackson, Tenn., stated that he found on his records four cases which have been under his observation since March 1. He had been inclined to attribute the frequency of these cases to malarial toxemia which has prevailed in his section the past year, the winter being too mild to kill the malarial parasite. Case 1, optic neuritis in right eye of four months' duration. J. F. P., young man aged 20, consulted me March 1, complaining of dimness of vision in right eye, which had existed for two months. He had a rather sallow complexion, tongue coated, and bowels constipated. Urine normal. Previous history good. Vision O. D. 20/40, O. S. 20/20. Ophthalmoscope revealed optic neuritis. The treatment consisted of an active cathartic, followed by saline, fluid extract jaborandi 15 drops three times a day, Henry's three chlorids 2 drams, with potassium iodid 15 drops, after meals. By March 31 patient's vision had improved to 20/30. Is still under treatment. Case 2, Mrs. O. H. P., aged 28, married, two children, consulted him March 28. Always been healthy until recently. Complained of haziness and dimness of vision in right eye. Lives in malarial section; has bilious attacks, complexion bad, tongue coated and bowels constipated; urine normal. O. D. 20/40, O. S. 20/20. Ophthalmoscope showed hemorrhage above disc and exudation extending from disc some distance above. Treatment was same as in Case 1, except that he had her take a pill three times daily consisting of calomel and podophyllum, with rhubarb and bicarbonate of sodium, to thoroughly arouse the secretions. The patient improved by April 6, when vision was 20/30, and by May 22 she was much better and vision was nearly 20/20. Case 3, Mrs. S. B. J., aged 23, married two years, previous health good, bilious temperament, consulted him March 6, stating that she had noticed about six weeks before dimness of vision in right eye, which was just before her baby was born. Had never before had any trouble with the eyes. The attack came on suddenly. O. D. sees card of letters on contact. Found large retinal hemorrhage covering almost the entire temporal field. There was no disease of the kidneys or any organic lesion whatever. The secretions were not active and the treatment was the same as in Case 1, with the addition of sodium phosphate, one or two drams, in a glass of hot water before breakfast. May 27, vision equaled 20/200.

DR. J. A. PATTERSON, Colorado Springs, remarked that we must not forget the possibility of intranasal complications as a cause of these conditions, and we must bear in mind that just an ordinary glance at the nose is not sufficient to exclude trouble there as a causative factor. It takes time, patience and skill in that line of work before this possibility may be excluded.

DR. WENDELL REBER, Philadelphia, said that when he read Dr. Hubbell's paper he ran over his records and found in the last year three cases of undoubted uniocular optic neuritis. He did not think it a very rare phenomenon. He thought it more often a focal disease than a manifestation of general dyscrasia, and oftener a symptom of latent sinus disease than we have been led to believe, although latent sinus disease could not be found in any one of the three cases he had. It is true, too, that often the so-called sound nerve is not really a sound nerve. It is difficult to get opthalmologists to agree as to when there is a low grade inflammation of the optic nerve. Of the three cases referred to one was in a boy; the inflammation uniocular. The nasal passages were examined very thoroughly without any discovery. The patient recovered under mercurial treatment. The second was a dentist, 23 years of age, who had previously had a badly infected ulcer of the cornea. He presented an unmistakable picture of neuritis with small hemorrhages. The patient was seen in consultation with Dr. Sweet. Several urinalyses were made with negative results. The third was a young woman; there were no nasal complications; no rheumatic taint; no kidney trouble. He called attention to the valuable action of chloral in producing cerebral

DR. A. R. BAKER, Cleveland, said that he had read the report of Dr. Hubbell's cases with a great deal of interest. He thought that many of these cases were unilateral. Some years ago he reported to the society a case of retinitis circinata in one eye, with the other eye perfectly clear. One lesson that we should learn is to examine both eyes carefully. He recalled a case not so long ago where he examined the right eye and found it normal, and for some reason or other did not examine the left. He called in a neurologist on the case and the first thing he did was to call attention to a typical optic neuritis in the other eye that he had overlooked. The attention that has been called to the fact that these cases may be unilateral should be a lesson in this respect.

DR. C. J. KIPP, Newark, N. J., called attention to a class of cases which seem to be primary optic neuritis and which are not. There is a circumscribed retinitis so close to the disc that you cannot separate it. There is an appearance of choked disc, sometimes swollen 3 diopters and more, and you can not distinguish it from primary optic neuritis until the disease has run its course. Then you find at one side an atrophic patch fringed with pigment. The only way to distinguish this condition is to look for deposits on Descemet's membrane. There is almost always a fine deposit in the first stage. He had recently had such a case occurring in a physician of 40 years who came in with apparent choked disc. He thought he might have some brain trouble and his mind was not easy until the disease ran its course and he discovered the patch adjoining the disc. Of course, he did not mean to infer that these cases of Dr. Hubbell's were of that kind at all.

DR. E. E. HOLT, Portland, Me., said he remembered in a discussion of this subject at the seventh international congress it was brought out that neurologists often discover neuritis of one or both eyes without any reference being made to loss of sight. He had in a number of instances since 1881 seen quite marked optic neuritis in one eye without any appreciable diminution in vision. He thought the condition common.

DR. S. D. RISLEY, Philadelphia, said he was glad to hear Dr. Kipp call attention to the danger of mistaking cases of retino choroiditis for optic neuritis; we may sometimes make this mistake. It is to his mind very important from the standpoint of prognosis with reference to optic neuritis. He is inclined to believe that uniocular neuritis is of much less grave import than binocular; it is certainly so in his experience, and, for the reason that they are often due to what may be called a local origin, and not to intracranial disease or disease of the general nervous system. For instance in two of the cases he had seen they were associated with disease of the contiguous sinuses. There was contracted field associated with considerable congestion and inflammation of the choroid, as nearly all these sinus cases in his experience had been. He regretted that in the report of these cases there had not been some attention paid to acuity of vision, as the presence or absence of central blind spots and the field of vision for form and color. One of the early cases he saw was unquestionably due to malarial infection, as blood examination proved. It resulted in partial optic nerve atrophy and distinct cutting out of one quadrant of the field of vision. It seemed to him that in these cases of unilocular neuritis we should expect to find as a final outcome an impairment of the field of vision. One curious thing about the cases he had seen is that with few exceptions he had been unable to determine any cause for the existing condition of affairs. The first case he remembered was that of a man in whom the disease came on in one side after he had been shoveling snow, and why it involved one eye and not both is incomprehensible. Another case was that of a woman who had a distinct choked disc on one side which came on with sudden impairment of vision while she was ironing. In the absence of some general exposure he had been unable to determine any general etiology for the occurrence of unlocular neuritis. In the binocular form we find some disease of the nervous system, involvement of the kidneys, or intracranial trouble.

DR. WILLIAM H. WILDER, Chicago, remarked that there seemed to be a disposition of those taking part in the discussion to regard this condition as a disease entity. Why should we apply to a condition of uniocular retinitis or neuritis any particular attributes that we would not apply to binocular

disease of the same kind. In the cases he has seen, he has thought that we had an explanation in the anatomic asymmetry so frequently found in the body. We may have asymmetry of the optic nerve. We do not often have perfect symmetry. All have probably observed that in the vessels of the retina we find a certain condition of thickening of the arterioles of one eye and not a corresponding condition in the other. We know that we may have atheromatous conditions, or arteriosclerosis, affecting some parts of the body and not others. Why should it not be so in the eye? The condition may exist in one radial vessel and not the other. The same explanation may apply in these cases, particularly in some of the cases of uniocular neuro-retinitis. Whether it has any bearing on the ultimate prognosis he did not know.

DR. GEORGE E. DE SCHWEINITZ, Philadelphia, referred to unilateral optic neuritis with a swelling of at least two diopters. These cases, which have been referred to so extensively in the literature, are not at all uncommon. They are conveniently classified into four groups: 1. Unilateral optic neuritis due to brain tumor and other intracranial causes. 2. Unilateral optic neuritis due to certain well-known infections—the so-called unilateral forms of infectious optic neuritis of Uhthoff's classification. 3. Unilateral optic neuritis due to local causes, for example, diseases in the neighborhood of the optic foramen or the contiguous sinuses. 4. Unilateral optic neuritis due to conditions associated with the vascular supply, for example, arteriosclerosis and endophlebitis. There are certain types of unilateral retrobulbar neuritis which may precede or follow facial palsy, and there is a similarity of anatomic surroundings of the optic foramen and the Fallopian canal as referred to in Green's paper on this subject. Dr. de Schweinitz agreed with Dr. Wilder's explanation which determines for anatomic reasons a unilateral instead of a bilateral neuritis and agreed that it is not a disease entity, but a local manifestation.

DR. MELVILLE BLACK, Denver, called attention to the value of the estimation of blood pressure in these cases. It has been found that where the tension is high its reduction by proper medication will do much toward bringing about recovery from the condition. It seemed that the universal use of iodid of potassium might have been due largely to its effect on the blood tension.

DR. A. A. HUBBELL, Buffalo, agreed with Dr. Wilder and Dr. de Schweinitz. He thought Dr. Herron had applied cases that are not in this category. He had taken into consideration the diseases of the contiguous sinuses and the results of arteriosclerosis, and thought that arteriosclerosis is perhaps one of the best explanations we have for most of these cases. As to Dr. Kipp's suggestion, it might apply in some cases, but he had not felt that a choroiditis had any relation to this condition.

THE RELATION OF NERVE IMPULSE TO CUTANEOUS INFLAMMATION.*

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Of the many unsolved problems in the pathogenesis of skin diseases there is one which, by reason of the broad applicability of the points involved, is of pre-eminent importance, namely, the relation of the nervous system to cutaneous inflammation. To illustrate the diversity of opinion and general confusion which obtains on this subject a few instances may be cited. There is a condition called by the French *nèvrodermite*; it is regarded by them as a distinct disease entity of nervous origin, but by American dermatologists the pathogenesis given is not accepted and, therefore, the condition is scarcely recognized. The adherents of the Vienna school speak of *neurotische* or *reflectorische Entzündung* or *Dermatitis*, thereby conceding that an inflammatory lesion may have a nervous cause. Turning to authorities in our own language, a striking example of obscurity with respect to nerve relations in pathology is to be found in the textbook of a prominent author.[1] He devotes one short paragraph to the pathology of herpes progenitalis as follows:

"The presumption is in favor of the disease being due to a reflex irritation of the neighboring sympathetic ganglia through irritation of the sensory nerves of the part."

Far from being a clear-cut and complete elucidation of the pathology of the disease in question, this meager statement really throws no light on the subject, and coming, as it does, from an eminent authority its very deficiency in this respect makes it a confession of general lack of understanding of nervous relations in cutaneous inflammations.

These three citations: the *nèvrodermite* of the French, the *reflectorische Dermatitis* of the Vienna school, and the instance of vaguely expressed pathology of herpes, as understood by a great dermatologist, suggest the propriety of an inquiry along certain lines of pathogenesis in which the nervous system is a prominent factor. This inquiry may be introduced with a consideration of the Vienna idea. It is observed that the skin of an individual suffering with an acute localized dermatitis is often subject to a sudden outburst of a similar type elsewhere without an apparent external cause. These secondary appearances are regarded as reflex in origin, the explanation being that, in the absence of other causative factors, the nervous system acts as the effective intermediary agent in the spread of the disease from the primary area.

Analyzing this conception, the use of the term reflex is first to be considered. If its application be in a general sense only, without reference to any pathogenic relationship, its use, however convenient, is not to be commended, since the word reflex has a definite significance in medical parlance; if not used in conformity with this significance, it becomes at once misleading. On the other hand, if the term is intended to express a distinct etiologic fact, to show in a concise word a definite pathogenic relation, then its use postulates a certain proposition, the proof of which may properly be demanded, though perhaps not easily given.

By the expression dermatitis we understand, in a broad sense, an affection of the skin characterized by the clinical manifestations of inflammation. The term reflex as understood in medicine defines a physiologic complex, of which certain nerve structures and nerve impulses constitute the necessary elements. This complex in detail is as follows: An impulse passes along an afferent (sensory) nerve to a center whence it is reflected along an efferent (motor) nerve to a peripheral part, causing eventually some organ to perform its function. In the light of these definitions a reflex dermatitis may be said to be an inflammation of the skin the result of reflex nerve action; or, more strictly, of efferent nerve impulse, since that portion of the reflex act comprising the afferent or sensory impulse ends with the receiving center, and, irrespective of the nature of the stimulus producing it, is incapable of changing the fixed character of the efferent or motor impulse. From these considerations we are able to formulate the broader proposition, namely, that the pathogenic process called inflammation can be initiated through the medium of motor-nerve impulse alone.

This is a postulate which underlies the *nèvrodermite*

* Read in the Section on Cutaneous Medicine and Surgery of the American Medical Association at the Fifty-seventh Annual Session, June, 1906.

1. Crocker: Diseases of the Skin, third edition.

of Brocq and Jacquet.[2] Its presence may be traced in a very appreciable portion of dermatologic thought today, because it lends itself so readily to the support of an obscure pathogenesis, a fact well illustrated in the quoted paragraph on herpes. It is a postulate which calls for proof. Its use and abuse will not diminish so long as its validity as a premise is accepted. But that validity is not so easily established as casual thought would expect; it is, therefore, in the interest of scientific accuracy in dermatology that the question be made a subject of discussion.

The problem, then, is this: Can the process of inflammation be produced by nerve impulse alone? Has a motor impulse, having its source in the conversion at a receiving center of a sensory impulse from the periphery, the power of creating the inflammation complex? If these questions be answered in the negative, another arises: What additional elements are necessary to bridge the gap between the factor nerve impulse, sensory and motor, and the result inflammation?

Clinically, inflammation is recognized by the so-called classical symptoms—*rubor, calor, tumor* and *dolor*. These constitute the surface manifestations of a complex series of changes taking place within the tissues, in which the blood and its constituents, the blood vessels, and the fixed tissue elements all participate. The various steps in the process, approximately in the order of their development, may be described as follows: There is first a dilatation of the blood vessels; this is succeeded by a slowing of the blood current, with margination of the leucocytes; next occurs a passing outward of the white blood corpuscles and the fluid elements of the blood, with a varying number of erythrocytes, through the vessel walls into the surrounding tissue, thus forming an exudate; lastly, proliferative changes occur in the fixed tissue of the part.

A question here suggests itself: What is the essential element in inflammation? Or expressed in another form: Which one of the steps above enumerated must necessarily be present in order that the condition may be termed correctly inflammation? The answer must take into consideration the purpose of the process. Though regarded as a manifestation of disease, it is in itself unquestionably a conservative measure, having for its purpose, first, the removal from the organism of irritants which threaten the safety of the whole or its component cells, and, second, the repair of any damage that may have resulted. Such removal may necessitate actual destruction of the irritant by phagocytosis, its dilution or neutralization by exudate, or its encapsulation by connective tissue; repair is accomplished by proliferative changes in the tissue which has suffered injury. The process of inflammation fulfills these requirements. The comparative value of the changes may be studied in avascular structures.[3] If the epithelium of the center of the cornea be damaged to a very slight degree, degenerative changes occur in the corneal tissue in the immediate neighborhood, but repair takes place without accumulation of leucocytes. If the injury be greater, repair is preceded by a massing about the lesion of leucocytes drawn, not from the circumcorneal blood vessels, which remain unaffected, but from the free wandering cells of the tissue. If, however, the injury done be severe, the vessels nearest the lesion dilate, diapedesis of leucocytes takes place, and fluid accumulates in the tissue. These findings would seem to indicate that in the work of repair and defense the impulse to proliferation ranks first and the migration of leucocytes second; vascular changes are subservient to the latter. It must be admitted, however, that authorities differ in their conception of inflammation. Metchnikoff[4] holds that it is the response of the organism to external irritation; thus, he would regard the process which followed the first and second instances of corneal injury cited above as true inflammation. Heinz,[5] on the other hand, considers that vascular changes are necessary and would reject these instances as not inflammatory. While Metchnikoff's conception has more in it to commend itself, it is immaterial which of the two is correct, inasmuch as we are concerned with vascular tissues. It is significant that the migration of leucocytes and fixed tissue proliferation are common to both conceptions.

To determine the exact part taken by nervous impulse in inflammation, a further analysis of the stages given must be made.

I. DILATATION OF THE BLOOD VESSELS.

The calibration of those vessels which are supplied with muscular coats is known to be under the control of the vasomotor nerves. These are of two kinds: vasoconstrictors and vasodilator. Stimulation of the former results in vessel constriction; paralysis of the former or stimulation of the latter leads to vessel dilatation. The principal vasomotor center has been located by method of spinal-cord section in the floor of the fourth ventricle; subsidiary centers are present in the cord, in the sympathetic ganglia and on the vessel walls. The constrictor nerves pass through the lateral sympathetic ganglia to their terminations in the vessel walls; the dilators have their relay stations in the great ganglionic plexus of the thoracic, abdominal and pelvic cavities, whence they are distributed to the vessels. The innervation of those blood channels not provided with muscular coats, i. e., the capillaries, is not so clear. It was formerly believed that they were not under nervous control, but more recently it has been demonstrated[6] that contractile cells are present in their walls, and that their lumen can be changed by stimulation applied directly or through the medium of the nerves. We are justified, therefore, in assuming that all vessels are under vasomotor influence. Such being the case, reflex action becomes a very important agent in the production of vessel dilatation in inflammation. Two other factors are to be mentioned as contributing to hyperemia: the loss of vessel tone due to direct paralysis of the muscular elements, and the diminution of extravascular tension before the development of large exudate. Both of these actions result from the local presence of toxins.

II. SLOWING OF THE BLOOD STREAM AND MARGINATION OF THE LEUCOCYTES.

Cohnheim,[7] the discoverer of diapedesis and one of the earliest investigators of the phenomena of inflammation, observed that at first an acceleration of blood flow occurred, followed later by retardation. The arterial pressure and the vascular endothelium remaining unaltered, increase in the cross section of the vessel should result in acceleration of current; this, however, is soon neutralized by the action of other factors. Retardation has been explained in various ways: by increase of fibrin in

2. La Practique Dermatologique,, vol 11.
3. Adami: Allbutt's System of Medicine, vol. 1.
4. Metchnikoff: Comparative Pathology of Inflammation.
5. Heinz: Handb. d. exp. Path. u. Pharm., vol. 1, part 1.
6. Steinach and Kahn: Arch. f. d. ges. Physiol., Bonn, xcvii, 105-133.
7. Cohnheim: Vorlesungen über allgemeine Pathologe, 2 Aufl., vol. 1.

the blood and by actual deposition of fibrin in the capillaries, by an attraction exercised on the blood by the surrounding tissue, which under the stimulus to hypertrophy requires more nutritive material, and by change in the endothelium of the vessel walls in the direction of greater viscosity. These theories are not easy of demonstration; that some sort of alteration occurs in the endothelium may be inferred from the subsequent act of diapedesis and secretion of fluid (since it is probable that the endothelium possesses a secretory function[8]). A change resulting from local toxic action must also be admitted. It can not be asserted positively that any alteration from these possible causes necessarily increases cell viscosity.

The margination of leucocytes is explicable, in part at least, by the law of hydrodynamics that the lighter bodies carried in a current seek the slower portions of the latter. The white corpuscles, of less specific gravity than the red, would drift to the periphery of the blood stream where the greatest retardation would occur. A second factor is to be found in chemotaxis, the physiologic property by virtue of which leucocytes are attracted or repelled by other substances. This action is exerted through the vessel wall and is due to the presence of an extravascular toxic agent. Leucocytic migration is independent of direct nerve influence.

III. DIAPEDESIS.

The leucocytes pass outward through the vessel walls as the result of several factors, the most vital of which are: first, the inherent property of certain white corpuscles of ameboid movements, and, second, the reaction of the leucocytes to the chemotactic influence of an extravascular irritant. To these may be added: the *vis a tergo* of the blood stream and the change in the cells of the vessel walls; both of these factors are necessary for the passing outward of the red corpuscles. The alterations in the vessel tissue comprise a thinning of the intercellular cement substance and a widening of the stomata marking the points of contact of several cells. Through these stomata, serum, leucocytes and red corpuscles may be forced by pressure alone; the attenuation of the intercellular substance and the altered consistency of the endothelium probably facilitate the migratory act of the leucocytes. The fluid portion of the blood reaches the exterior of the vessels through the stomata, as already mentioned, by the physical act of osmosis and probably by secretory action of the endothelium. Local toxic influences may favor osmosis by producing alteration in the cells of the vessel walls and by disturbing the isotonic relation between vessel content and perivascular fluids. Any secretory power possessed by the endothelia must be under direct motor nerve control.

IV. PROLIFERATION OF FIXED TISSUE ELEMENTS.

The replacement of destroyed tissue is accomplished by proliferation of the fixed cells of the part. The stimulus to this activity is to be found in the increased nutrition of the portion involved, and in that innate property of cells which causes them to multiply when there is a demand for cellular increase.

V. SUMMARY OF NERVE INFLUENCES.

In summing up the influence which the nerves are thus shown to have in the evolutionary stages of inflammation it must be borne clearly in mind that we are now concerned with those impulses which occupy the distal portion of the reflex arc only; that is, those which are motor in nature. From what has been said we are warranted in affirming:

1. The dilatation of the blood vessels is very largely the result of direct nerve action.

2. The slowing of the blood stream and margination of the leucocytes is related to direct nerve action only so far as a secretory impulse to the vessel endothelium changes their physical properties; that is, increases their adhesiveness.

3. Diapedesis of leucocytes is in no way dependent on direct nerve action; it is favored by conditions to the development of which nerve action has contributed. The pouring out of fluid from the vessels is probably due, in part at least, to direct nerve action.

4. Proliferation of fixed tissue elements is not the result of direct nerve action.

From this summary we may conclude that motor nerve impulse *per se* does not suffice to produce all the phenomena of inflammation.

VI. INFLUENCE OF SENSORY NERVES.

The question arises: What part in the production of inflammation is contributed by the sensory nerves, the proximal arm of the reflex arc? The function of a sensory nerve in this connection can be nothing other than to transmit to a center an impulse received at its peripheral termination. That impulse can be influenced by the nature of the irritant which produces it only as regards intensity, and it can impart to the motor impulse at the reflex center no other quality than that of intensity. The sensory impulse, therefore, while a necessary part of the reflex arc, influences the process of inflammation only as it prompts a mild or an energetic motor action beyond the receiving center. Combining this conclusion with the one previously made, we have the answer to our first question: The phenomena of inflammation can not be produced by reflex action alone.

VII. FACTOR SUPPLEMENTING NERVE INFLUENCE.

From what has been said it is patent that some factor must operate to supplement nerve influence in the pathogenesis of inflammation. This factor must furnish an effective cause for the development of those steps in the complex which are not the result of combined sensory and motor nerve stimulation. Of these steps the most important is the migration of leucocytes, and, as this migration is dependent on chemotaxis plus the ameboid properties of the cells themselves, the factor necessary must embody the further requirement of chemotaxis; that is, the power of attracting leucocytes. This embodiment is to be found in the presence locally of an irritant.

If we seek to define more specifically the nature of the irritation thus required, we will find that all types may be classified, according to source, under four headings, namely, chemical, mechanical, thermal, and actinic. If now we consider the exact manner in which the various forms of irritation accomplish their work as provocators of inflammation, we must admit that the first, chemical irritation, includes them all. It is a mooted question whether a substance acting in a purely mechanical way induces inflammation because of the difficulty of eliminating a coincident bacterial infection. It must be accepted, however, that the products developed from the degeneration and destruction of protoplasm are capable of acting as chemical irritants, and that in mechanical injury, even of slight degree, by a perfectly sterile agent, these products appear *in situ* with power to incite inflammation. The same statement holds with respect to

8. Sihler: Jour. Experim. Med., vol. 5, p. 493.

the action of thermal and actinic agencies: the cellular degeneration and destruction which ensue result in the formation locally of substances, derivatives of protoplasm, which are inimical to the welfare of the unaffected tissue; hence inflammation occurs.

Given an area of skin within which a chemical irritant acts and we have all the necessary elements for the development of a dermatitis; there is a stimulation of sensory nerves, reflex response in vessel dilatation and cellular secretion, migration of leucocytes to the site of irritation, development of an exudate, and, lastly, repair of tissue destroyed. We find in chemical irritation, therefore, the answer to the second question: It is the factor needed to induce and to supplement nerve action in the production of inflammation.

With respect to the pathogenesis of the various types of herpetic disease it may be said that the theory of the development of toxins at the site of lesion as the result of cellular disintegration has not been given the attention it merits. Granting that degenerative changes have been found in the spinal ganglia and in nerve trunks at considerable distance from the herpetic eruption: these can not directly produce the latter by conducting, as it were the pathologic condition inflammation from one part of a nerve to its terminations, leaving the intervening section of the nerve trunk intact. The more rational explanation is that these changes in nerve ganglia and trunk modify in some manner the normal trophic impulses, thereby leading to necrotic or necrobiotic alteration in the part innervated where, as suggested by Blaschko,[9] the products of disintegrating protoplasm alone suffice, without the help of secondary infection, to exert a local toxic action and to develop an inflammatory lesion.

SUMMARY.

To recapitulate:

1. The idea that nerve impulse alone can initiate inflammation is widespread in dermatology and forms the basis of the explanation of the pathogenesis in several conditions.

2. Reflex action is the form of nerve influence most frequently set forth as the originator of inflammation.

3. A reflex requires for its production two kinds of nerve fiber, sensory and motor, a receiving center, and a stimulus applied at a sensory termination. The sensory impulse thus created is converted at the center into a motor impulse which, passing to the terminations of the motor fibers, causes the organ innervated to perform its function. Any nerve impulse to be directly effective in producing inflammation through reflex action must be motor in nature.

4. Inflammation is a complex which when complete presents the following stages in its development: Dilatation of the blood vessels, slowing of blood stream and margination of leucocytes, diapedesis of cellular and fluid constituents of the blood with formation of an exudate, and proliferation of fixed tissue elements.

5. Authorities differ in their conception of inflammation. In the broadest view taken, tissue proliferation is always present, migration of leucocytes usually is found, and vascular changes may occur. In the most restricted view, vascular phenomena must be present; in other words, all the stages enumerated must be found. Tissue proliferation and leucocytic migration, therefore, are common to all conceptions of the process.

6. Of the stages mentioned, direct motor impulse can produce: dilatation of the blood vessels and secretion of fluid by the endothelium. It is possible that it may influence indirectly the slowing of the blood stream, the margination of the leucocytes, and the readiness of passage of the latter through the vessel walls. Motor impulse has no direct relation to the migration of leucocytes and proliferative tissue changes, and hence is not sufficient to produce inflammation unaided and alone.

7. The factor necessary to supplement nerve action must embody the requirements of chemotaxis, the power of attracting leucocytes. This embodiment is found in external irritation.

8. The four sources of irritation, chemical, mechanical, thermal, and actinic, by analysis, may be narrowed to one, namely, chemical. In chemical irritation reside all the essentials for the production of the full inflammation complex; it can initiate the requisite nerve action and can supply those factors which are necessary in addition thereto for the complete development of the process.

9. The products arising from the degeneration or destruction of protoplasm, whether from trauma, perversion of trophic nerve influence, or disturbance of cellular nutrition, may be toxic to living cells, and so furnish the chemical irritation requisite for the initiation of inflammation. This is probably the *modus operandi* in the various forms of herpes.

10. Finally, a purely reflex dermatitis is an impossibility, for the reason that every inflammatory skin lesion, because of the nature of the pathologic process involved, must have in its etiology the factor, local toxic irritation.

100 State Street.

9. Blaschko: Mracek's Handb. d. Hautkrankh., vol. 1, art.: Herpes.

PERSONAL EXPERIENCE IN PREVENTING SPREAD OF YELLOW FEVER.

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The control of epidemics of yellow fever has resolved itself into a very simple method, that of adopting measures based on the doctrine of the transmission of yellow fever by means of the stegomyia mosquito alone.

During the past summer a number of instances occurred in which an epidemic was controlled long before cold weather set in, but was not entirely eradicated. To entirely eradicate the disease from a community requires a prolonged campaign on the same lines and often waits for the aid of winter weather so inimical to the life of the mosquito.

It was my province to advise authorities in fever-stricken communities as to the best methods to be adopted in order to prevent an epidemic. In this it was always advisable to enlist the co-operation of the public, and for this purpose lectures were given explaining the method of spread of this disease by means of the stegomyia and the measures necessary to prevent its spread.

Probably the most serious task was to convince the people that the stegomyia mosquito was the only means by which yellow fever is spread. It was recognized that in order to be successful in carrying out the measures to be adopted an educational campaign must be instituted. The convincing experiments of Surgeon Walter Reed and his colleagues were explained and personal observations regarding the spread added much interest to the subject and gave added confidence.

I have had an audience where 90 per cent. were non-believers in the theory of the transmission of yellow fever by the mosquito alone, and when I had finished but few "doubting Thomases" remained, and the new disciples became willing and enthusiastic workers along the lines indicated.

The measures for prevention of spread were then presented and given in the following line of argument:

An epidemic is dependent on three elements for its spread or continuance, viz.: 1, a case of yellow fever; 2, stegomyia mosquitoes; 3, non-immunes.

Without any one of the three elements the disease would cease. Measures for preventing the spread or propagation of yellow fever are, therefore, based on or dependent on the control of any or all of the elements.

For the first element:—Report every case and screen all cases of fever.

For the second element:—Destroy the mosquitoes by destroying the breeding places and by killing all mosquitoes which are at large.

For the third element:—Screen the non-immune or limit his movements as much as possible in order to reduce the chances of his becoming bitten by infected mosquitoes.

Effectually carrying out the first two provisions will give added security to the non-immune.

Could we be sure of knowing every case of yellow fever it would be an easy matter to eradicate the disease.

Here is where we wish to have the public with us. Report every case of illness and treat by screening all such cases of sickness from the bite of the stegomyia mosquito. It is during the first three days of illness that a mosquito can become contaminated, so that the sooner the individual is screened the less time is given for the infection of mosquitoes.

Of course, failure to report or to take such precautions causes the possible continuance or increase of infection.

The second measure which is directed against the mosquito is for the purpose of reducing the number of mosquitoes to a minimum, thereby reducing the chances of any one being bitten by a mosquito.

These measures take into account two conditions: (a) The mosquitoes which are breeding; (b) the adult mosquito at large.

Class A. For the breeding places, oil is used. By covering the surface of water with a film of oil, mosquito larvæ which may be in such places are killed. The larger number of mosquitoes are killed by this process. This oiling reduces the number of mosquitoes to be added and afterward to be considered with Class B.

Whenever practical the breeding place should be screened to eliminate this place from again becoming a breeding place. This screening simply prevents the mosquito from reaching the water for the laying of its eggs, where they will develop into larvæ, pupæ and mosquitoes.

Class B. There are stegomyiæ which are infected, some infective and some which are apt to become infected by biting a known or unknown case of yellow fever, hence measures for the destruction of all such are adopted.

For this purpose fumigation is done with some insecticide. This measure is used at once where a known case of yellow fever has occurred in order to destroy a possible new focus, that is, kill the mosquitoes which may have become infected by biting this known case. As the mosquito does not fly great distances, the immediate neighborhood is also fumigated to kill any mosquitoes which may have left the known infected residence.

Could the stegomyia mosquito be absolutely stamped out, this element, No. 2, so necessary for the propagation of yellow fever, would give the ideal result, and no more fever or epidemic need be feared. This is, however, much more difficult to accomplish than one would think.

It is evident from this that when sporadic cases occur every stegomyia, i. e., infected stegomyia, has not been eliminated and that measures must be continued.

The reduction of mosquitoes to a minimum is the best that can be accomplished for immediate results, namely, the control of an epidemic.

So much accomplished, assurance may be given the people that there is no more fear from an epidemic and that but few cases will occur.

Practical demonstrations of this were numerous during the past year.

At Tallulah, La., where an epidemic was raging, a campaign conducted by me will show the results which can be accomplished by following the lines indicated in the foregoing. The following account is from an official report I submitted to the surgeon general, Public Health and Marine-Hospital Service:

From Tallulah, La., appeals for help were made to the State Board of Health and I was directed by Surgeon White to proceed at once to that place. I arrived at Tallulah on the afternoon of Sept. 12, 1905, and there I met Dr. Charles Chassaignac, representing the State Board of Health.

After a conference with him and the local board of health it was decided that Dr. Chassaignac have supervision of the hospitals, physicians and nurses for the treatment of the sick, and that I assume charge of all sanitary matters.

After an inspection of the town and a study of the situation I found that thirty-six blocks out of forty were infected with primary and secondary cases in many houses.

A public meeting was held on the same afternoon at the courthouse, where Dr. Chassaignac and I made some remarks on the transmission of yellow fever by means of the mosquito and on the measures to be adopted for its eradication.

I formulated a plan of campaign which consisted of the fumigation and refumigation of every house in the town, the oiling of every cistern, barrel and other breeding place for mosquitoes every five days, and such other sanitation as might be required.

An office with records and supplies was established, fumigating and oiling crews organized and the work started at once under my personal supervision Sept. 13, 1905.

The doctors constituted the inspectors and later a special sanitary inspector was appointed. Two hospitals, one for whites and one for colored, were screened and fumigated and made ready at once for the reception of the sick. For this purpose two hotels were converted into hospitals.

The town was divided into ten districts and the fumigation and oiling forces assigned their work by district each day. Five fumigating gangs of five men and one gang boss in each were employed.

The outfit for each crew consisted of the following:

Cart or wagon.	Measure to hold 2 lbs. sulphur.
Bucket of paste.	Alcohol in small oil can.
Whitewash brush.	Knife.
Ladder.	Matches.
Paper.	Pots and pans.
Flowers of sulphur.	Plank.

Each crew was carefully instructed in every detail regarding the work of fumigation. They were told to first close every window and door on entering a house to be fumigated, and were shown how to make houses airtight by pasting paper over all openings. In order that the work would be clean and that paste might not be smeared over the woodwork, and to avoid spilling of paste on the floors, the men were required to spread the paste over a smooth plank, thoroughly wettting it, then place the strips of paper on this and, when required, the strip of paper was removed and applied. The "boss" of each crew was directed not to do any work himself except to give his entire attention to the details of the work. He had been instructed as to how to light sulphur and the quantity to be used, and what articles should be removed to avoid damage by fumigation.

Personal attention and inspection of the work was made by me during the day.

Sulphur, two pounds per 1,000 cubic feet for two hours, was used in every instance except in some large stores, where two pounds of pyrethrum per 1,000 cubic feet was used for four-hour exposure.

In work of this character my plan was to avoid or reduce every source of error possible in killing out the stegomyia mosquito, so prevalent in this community, and for this reason sulphur was generally employed in the fumigation.

Sources of error in this work are usually two:

1. In pasting up some places may be overlooked through which a mosquito may escape. This error must be accepted, as the best man may overlook something.

2. The agent to be used in fumigation should insure the death of the mosquito. With sulphur in the proper quantity and time of exposure this is certainly sure and simply requires removal of the sulphur pots.

In the use of pyrethrum the mosquito is stunned, and the laborer who does not appreciate the importance of this work in every detail is depended on to kill the mosquito after careful sweeping. This requires also additional time, and the employé usually does such work hastily to accomplish a record for number of houses fumigated.

Two oiling crews of two men in each were instructed to oil all cisterns, barrels, wells, tanks and any other breeding place for mosquitoes.

For this purpose refined oil was used at the first oiling. This oil spreads quickly and forms a good film over the surface of water to be covered. The object was to insure destruction of larvæ as early as possible. Crude oil has a tendency to form large globules and thus leave spaces for the larvæ to reach the surface, where they can obtain air to breathe. At the first oiling a quart of refined oil was used for each cistern, a pint for each barrel and well, a smaller quantity for smaller receptacles. This work was accomplished on the first day by three crews; afterward two crews were operating. On the third day I had a survey taken of known breeding places of mosquitoes which had been oiled, and the following data obtained:

Tanks or cisterns above ground	102
Barrels oiled 1st day and emptied on 3d day	145
Wells	48
Cisterns under ground	11
Buckets oiled 1st day, emptied 3d day	37

The oiling, as previously stated, was repeated every five days. One crew using refined oil and one crew crude oil for standing water or any possible breeding places covered the town during the intervals. As outhouses might become places for standing water where mosquitoes might deposit their eggs, a crew was formed to do liming of every such closet in the town, and continued to do this until about the end of the campaign.

Mosquito bars were depended on for isolating sick at their houses. Whenever one could be persuaded to go to the hospital this was done. Under the circumstances it was impracticable to employ any other means of screening.

At the end of nine days considerable work had been accomplished and mosquitoes were noticeably reduced in numbers. The effect on the reduction of the fever cases followed the marked reduction in the number of mosquitoes. There remained several houses infected which could not be fumigated on account of serious illness in the house, so that it was fourteen days after the work began before every house had been at least once fumigated.

An incident was noted toward the end of the epidemic. A young man, Mr. S., had taken every precaution against the bite of a mosquito by remaining behind screened doors and windows until one day he was required to go to the postoffice for a money order. This house was badly infected with stegomyia, but could not be fumigated on account of a severe case of yellow fever in the house. While the young man was waiting he suddenly felt a mosquito biting his hand, which he killed when nearly full of blood. He recorded the time, and four days and five hours after the bite went down with a sharp attack of yellow fever. The house was fumigated a few days later.

While the number of cases were being reduced in the town of Tallulah cases were increasing in the surrounding plantations from one to four miles distant until work on the same lines given above was adopted.

Wherever yellow fever was found to be spreading there invariably the *Stegomyia fasciata* was also found. In a number of scattered houses 300 to 400 yards apart I often found barrels full of larvæ, and the stegomyia the only prevailing mosquito.

The following information was obtained from a house-to-house inspection in the town of Tallulah proper, on Sept. 23, 1905:

Whites who have had yellow fever	66	
Colored who have had yellow fever	234	
		300
Whites who have not had yellow fever	48	
Colored who have not had yellow fever	144	
		192
Total		492

It will be understood that the list of those who have had yellow fever means all persons who had been sick any time since August, when the epidemic started. This census does not include refugees nor persons living on the adjoining plantations.

A report of new cases for this period will show the marked decline in number as sanitation progressed. Beginning with September 19 new cases in Tallulah and adjoining plantations were reported and included in this report (given on the next page).

A total of 163 cases were reported between September 13 and 27, which includes the plantations.

It may be stated that approximately 140 of these cases occurred in Tallulah in fifteen days, of which number ninety occurred during the first four days and were probably in the incubating period of the disease when

the work started, and fifty thereafter. This would give 160 cases scattered over thirty-six blocks as having occurred previous to my arrival, Sept. 12, 1905.

TABLE OF NEW CASES, SHOWING DECLINE IN NUMBER UNDER SANITATION.

No. of day.	Date.	No. new cases.		Deaths.
1	September 13	29		1
2	September 14	26		0
3	September 15	19		0
4	September 16	16		1
5	September 17	9		0
6	September 18	10		0
7	September 19	6		1
8	September 20	12	Includes	0
9	September 21	6	cases on	0
10	September 22	6	plantations.	0
11	September 23	5		0
12	September 24	4		0
13	September 25	1 & 7 on plantations.		
14	September 26	2 & 3 on plantations.		
15	September 27	1 & 1 on plantations.		1
	Total	163		4

The sanitary measures adopted, namely, the extermination of the stegomyia mosquitoes, was the only plan followed for controlling the epidemic. That this was effectual may be seen from the data submitted: that on the fifteenth day only one new case was reported in Tallulah, and this case was the one cited with an incubation of four days and five hours.

Before my departure, September 27, written instructions were left for the continuance of the work in and outside of Tallulah, as follows:

MEMORANDUM.

TALLULAH, Sept. 27, 1905.

Oil every cistern, barrel of water and other breeding places with refined oil every Saturday.

Oil every cistern, barrel, etc., on surrounding plantations every Thursday.

Fumigate as soon as possible all houses with sick, and the two houses on either side, if on same square, and one house immediately across street and the two houses on either side of it if in the same square.

Lime all closets, particularly if there is water.

Oil with crude oil any collections of standing water under houses.

Remove new patients to hospital, if possible, and fumigate residence.

Screen all new cases.

There remained 190 persons out of the 492 in the town of Tallulah who had not been sick any time during the epidemic, and with the disease practically eradicated few would probably suffer an attack of the disease.

A large number of persons living on the surrounding plantations were also saved from an attack of this disease; how many is unknown.

I was informed by mail under date of Oct. 10, 1905, by Parish Health Officer G. W. Gaines that "only a case shows up averaging town and plantations about one per day." It must here be stated that a new plantation was found to be infected subsequent to my departure, but measures as adopted in others were enforced, which soon controlled its spread.

In conclusion I must say that the successful and favorable termination of the epidemic is rightly due to the hearty co-operation of the physicians and the people in carrying out and submitting to all the measures employed.

The "Queen of Old Age".—Under the heading "La Reina de la Vejez", the *Siglo Medico* publishes the portrait of Maria Santos, who is living in good health as a protégée in a Madrid hospital, and celebrated her one hundred and twenty-fourth birthday eight months ago. Her baptismal record is duly attested on the parish register, dating from 1781. She supported herself and her children by peddling vegetables until she lost her eyesight by an accident a few years ago.

GASTRIC ULCER.

SOME SPECIAL FEATURES; BASED ON THE STUDY OF ONE HUNDRED SPECIMENS.

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AND
FREDERICK C. HERRICK, M.D.
CLEVELAND, O.

With the causes of perforation, duration, morphology, and location of gastric ulceration in mind, we studied one hundred pathologic specimens with the hope of adding to what is already known in these lines. We have also included some observations with reference to the occurrence of hemorrhage and peritonitis at different ages in the two sexes.

The following are the results of this work. In 97 ulcers, in which the location could be definitely made out, it was as follows:

	Cases.	Per cent.
Lesser curvature	47	48
Posterior wall	30	31
Anterior wall	17	17
Greater curvature	3	3

The lesser curvature has heretofore been spoken of by writers without a definite understanding as to its limits. It must certainly be considered as more than a line along the upper edge of the organ. We wish to describe it as the space between the orifices and extending 2 cm. both anteriorly and posteriorly. Of the 47 ulcers on the lesser curvature, 25 exceeded these limits on both surfaces and were considered as saddle or horseshoe ulcers.

As to location with reference to orifices, we have followed Mayo's[1] division of the stomach into two parts, a pyloric or grinding portion lying to the right of a line drawn vertically from the right of the cardiac orifice, and a cardiac part to the left of this line. In the pyloric part were 94.3 per cent. of the ulcers, while 5.7 per cent. were in the cardiac part.

Of all the ulcers 73.3 per cent. were on the lesser curvature and posterior surface, which is recognized as the area of chronic ulceration. In seeking an explanation for this part of the stomach being especially liable to ulceration, we were led to consider the influence of the change of position of the organ when filled to that when empty. "The stomach varies greatly in size, position, direction and relations under normal physiologic conditions. . . . As the stomach is distended its fundus fills the left cupola of the diaphragm, pushing the left lobe of the liver toward the right side and tilting up the apex of the heart, while the lower part of the greater curvature lies so as to come in contact with the anterior abdominal wall below the left costal wall and the liver. . . . This movement of the pylorus to the right side is accompanied by one of rotation so that the orifice which, in the empty stomach, is directed toward the right side, looks backward."[2]

It will be seen that the two orifices are the most fixed points of the stomach, the pylorus rotating on distension and pointing backward. As a result of this rotation the greater curvature comes in contact with the anterior abdominal wall, the lesser curvature and orifices are fixed, the posterior wall near the pylorus becomes lower than when empty. It seems reasonable that these fixed points are less able to withstand the dragging from the currents and pressure of food than the more mobile ones. The lesser curvature and posterior pyloric wall would bear more of the wear and tear of the gastric peristalsis. These reasons may be advanced as partial explanations

1. Mayo, W. J.: St. Paul Medical Journal, February, 1904.
2. Quain: Dictionary of Medicine.

of this being the most frequent seat of chronic ulceration. Add to this the fact that there are many more tissues and structures to which these points may become adherent, thus causing a greater fixation and still more dragging during peristalsis, and we have a fairly reasonable hypothesis.

The occurrence of gastric ulcers in corresponding locations of the anterior and posterior surfaces has been noted by Mayo,[1] Fenwick[3] and others, but we think sufficient stress has not been laid on this point. In recurrent ulceration after medical cures the tendency has been to consider this recurrence as of the same ulcer, which has, therefore, been made an argument for surgical intervention. We think this so-called recurrence has frequently been the development of a symmetrically placed ulcer rather than the breaking down of the scar of a medically cured one. We have found symmetrical ulcers or scars in 37 per cent. Thus medical treatment is seen to be more efficient than often considered.

As regards multiple ulcers and scars without reference to relative location (symmetry) statistics vary between 19+ per cent. (Fenwick) and 28.5 per cent. (London Hospital). We have no doubt but that more careful postmortem inspection would increase these percentages. Thus in the pathologic institute at Kiel 10 per cent. of multiple ulcers and scars were ordinarily found, while under careful observation scars were found sufficient to raise this figure to 20 per cent. Certain ulcers tend to become chronic. The chief factors in this class are anemia, hyperacidity, location and adhesions of the stomach wall over the ulcer to surrounding tissues or structures.

Of the 100 specimens 82 were chronic, 13 were acute and 5 could not be determined. As regards the thickness of the edges; it was increased in 74.3 per cent. in the chronic ulcers; while in the acute in 13.3 per cent. Besides the thickening of the edges another characteristic was early noticed. In 45+ per cent. of all acute and chronic ulcers the edge nearer the cardia was sloping while that nearer the pylorus was undermined. Only a single ulcer located in the cardiac part was sloped and undermined in this way. Considering the pyloric part as a grinding organ with a peristaltic action and current directed toward the pyloric opening the above noted fact is significant. Further, of these ulcers the greatest tissue destruction resulting in perforation was in the base nearer the pylorus in 28.9 per cent. In the remaining 55 per cent. of all the ulcers the edges were irregularly abrupt, undermined or sloped.

Considering ulceration as to the amount of tissue destroyed, we have made the following classifications. The stomach wall was perforated in 34.6 per cent. The wall was destroyed and the liver, pancreas, or both together, formed a wall for the opening in part or completely in 27.8 per cent. In a few cases, 4.9 per cent., an inflammatory mass of fibrin, fat and lymph glands had prevented free perforation.

The question of fibrin on the peritoneal surface is an interesting one from a diagnostic standpoint at operation. Mr. Mayo Robson considers the presence of fine flakes or shreds of fibrin on the peritoneal surface of the stomach without discoverable cause in neighboring organs as strongly suggestive of gastric ulceration. We, therefore, observed this point closely, and found of all simple ulcers without perforation or adherent surrounding organs, fibrin flakes or shreds on the peritoneal surface in 74.3 per cent.

3. Fenwick: Ulcer of the Stomach.

Of the 100 cases the causes of death were noted in 55; 25 died of hemorrhage, 30 of peritonitis. Dividing these as to age and sex the following points were observed. Of the 25 who died of hemorrhage, 19 were males and 6 females. Of the 30 dying of peritonitis 8 were males and 22 females. Apparently males die more frequently of hemorrhage and females of perforation and peritonitis. Analysing these further as to age, we found of the 25 of both sexes dying of hemorrhage, all except one female, were thirty years of age or over. As regards the age at death in peritonitis, one male and fourteen females died before thirty years of age, after thirty years of age the contrast is less striking, six males and nine females dying of peritonitis. From these observations it appears that males are more likely to die of hemorrhage after thirty and females of peritonitis before thirty years of age.

In conclusion:

1. Seventy-three and three-tenths per cent. occurred on the lesser curvature or posterior surface.

2. The stomach rotation during digestion, and the adhesions are partial explanations of this fact.

3. Ulcers or scars were symmetrically placed on the anterior and posterior walls in 37 per cent.

4. Fibrin shreds were found in 74 per cent. on the peritoneal surface of simple ulcers.

5. Males with gastric ulceration die most commonly after thirty years of age from hemorrhage; females before thirty of perforation and peritonitis.

LESIONS PREDISPOSING TO CANCER.*

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It is difficult to avoid bringing into a paper of this kind the cause of origin of cancerous growths, since cause and prior lesion are so intimately related. Without some sort of stimulus or disturbance of cell relation many of the lesions would never become malignant. Whether a group of cells has been left out of place in fetal life and ready for aberrant growth, or gets misplaced later, can make no great difference for the purposes of this paper, but the latter occurrence seems best to harmonize with the facts. That mechanical, thermic, actinic, chemical, and perhaps local toxic influences often seem the positive exciting cause of malignant development can not be doubted. What the element is in cell relations that holds the balance in so many cases and loses its control in a few, we do not know.

Of all skin lesions tending to cancerous development there are none that rank so high as the rough, horny, scale-crusted, irregular points and patches, varying from pinhead to all sizes and shapes seen on the face, neck and hands. These occur so frequently on the thin, red, florid skin of people who are either red-haired, or have the "red-haired" type of skin, as to become a definite feature. The crusts are usually composed of small, horny cell masses; the skin beneath may show a bit tender, or it may be slightly thickened and irregular. Later, one or more points take on typical epitheliomatous changes, cell growth, infiltration, erosion, crusting, fissuring, ulceration. Often there are numerous epitheliomata on the one subject; but a majority of people go through life with their "scaly spots" better or worse, without reaching the malignant stage; hence radical treatment for these must await such development.

* Read before the Medical Association of Georgia, at Augusta, April 20, 1906.

Closely related to the above, or occurring with it, is the oily, seborrheic skin with points, discs or patches developing in a greasy surface, and showing greasy scales and, sooner or later, erosions, new growth, finally the epithelioma in full development. These two kinds of skins and lesions more frequently show multiple epitheliomata. Warty, flat, roughened patches, as of the "senile skin," often form the starting point of cancer. A persistent fissure of the lip may be the origin of epithelioma. Scars, as from burns, caustics, *x*-rays, incisions, boils, carbuncles and various injuries present a condition of cell displacement favorable to malignant growth.

A lesion from the pinch of a cracked and foul pipe stem has caused death from cancer of the lip. Phimosis and balanitis at times result in epithelioma. An innocent-looking epulis may prove not a fibroma, but a sarcoma.

Lupus erythematosus has been known to degenerate into cancer. Lupus vulgaris scars often so change. An apparently innocent wart may become malign, as may keratoses from long continued use of arsenic. Keene[1] in his paper before the American Medical Association two years ago insisted on the latent dangers in, and the removal of all moles, but was convinced of the impossibility of getting consent of the patient to such radical prophylaxis. My own observation is that few moles undergo cancerous change; but when they do, especially those of the pigmented type, their malignance and metastases may be horribly complete; their termination fatal.

The pigmentary type of malignant disease is the product of many lesions. A mole accidentally burned, and so being transformed into malignancy, is recorded by Crocker.[2] Johnston[3] reports cancer developing in a mole on the thigh; another on the back; another on the shoulder, and one on the abdomen. Following injury near the nail, a swelling, dark fluid discharge, pigmentary deposit in the growth—"melanotic whitlow"—may develop.

"Malignant freckle" spot on foot or leg may end in pigmentary cancer. Melanotic rodent ulcer or melanoepithelioma is another form. Melanoma of the eye has its usual beginning in a choroidal pigmentary spot.

It is often impossible to diagnose the type of these growths accurately without the aid of the microscope. Metastases of pigmentary cells are often extensive, the lethal end certain. Early and free surgical removal offers the only cure.

Wilfred Fox[4] considers most cases of melanoma as nevocarcinoma. Johnston found both types, nevocarcinoma and nevosarcoma; Fox, at variance with Johnston, convicts the pigment of the chief activity in cancerous change.

Cases under *x*-ray treatment for epithelioma often show partial, possibly complete destruction of the original disease with extension, or new development of disease in the scar or its borders. Skiagraphic *x*-ray burns and the burns of *x*-ray workers have time and again gone on to epithelioma and death. McLeod's case of a lupus-*x*-ray scar with cancer forming in its middle is striking.

Suppurative, broken down sebaceous cysts, or even the unbroken cysts, may be transformed into cancer.

A small injury of the tongue from a jagged tooth, and continued irritation, have sufficed to bring on cancer of that organ. A similar development may follow a syphilitis gumma. So with leucoplasia, the white spots and bands called "smoker's patches." Constant irritation of a tonsillary, pharyngeal, or esophageal lesion may terminate in the same way. Many cases of cancer of the stomach follow an ulcer; many of the gall bladder succeed erosions from biliary calculi. Ovarian cysts may so degenerate. Uterine myoma is not always benign. Cervical scars from old lacerations frequently form the starting point of cancer. Leucoplasia of the vulva often undergoes malignant change.

No adenoma of the breast is safe left in its place. The cicatrix from abscess of the breast has been sufficient to furnish the origin of cancer. Paget's disease of the nipple, which may possibly be confused with eczema, is usually cancerous in nature and progression.

Sufficient examples have been given and time and space are already too far exhausted to permit of an extension of the list.[5] In unnatural lesions and growths, in scars and irritated erosions, in parts subjected to continued injury, we have a loss of cell balance, an absence of normal restraint, and the scene laid for the entrance of the unknown element that determines the onset of carcinoma, sarcoma or endothelioma, all malignant.

To urge on people the dangers in lesions and growths not yet malignant will often be of no avail. In many cases the malignant change may never take place, but every effort should be made to cure irritated lesions and to remove irritant agents in the simple cases; and no growth certainly progressing towards cancerous evolution should be left untreated. On the slightest occurrence of symptoms tending to these changes, instant and thorough treatment must be instituted. Often the simplest erosion, smallest scirrhus or most minute irritated mole or other growth may liberate cells that wander away to form metastases of the most formidable character. It is proper to watch some cases without interference, and criminally negligent or ignorant to advise the patient to "let alone" any lesion or growth already showing signs of malignancy.

I have used the term cancer in its broad sense, to cover all types of growth whose tendency is to progression, insidious diffusion, recurrence after treatment, certain death without treatment, often death in spite of treatment.

REPORT OF CASES.

A few illustrative cases are here reported:

CASE 1.—Mr. Q., aged 59, cut with a razor a large, flesh-colored mole on his left cheek eight months before consulting me. The microscope showed epithelioma. It was excised. Permanent recovery.

CASE 2.—Mr. C. had a fungating and eroded pigmentary lesion on the top of left shoulder. There had been a dark mole there for years. It was irritated by suspenders. The man recovered after prolonged caustic treatment and protection.

CASE 3.—Mr. M., aged 66. A diagnosis of melanosarcoma of dorsum right foot was made. Forty years previously a black dot of pin-head size appeared just to the right of the great toe's extensor tendon. There was slow peripheral growth for twenty-five or thirty years; then it increased more rapidly, especially in the last three or four years. When seen, the lesion was two by two inches in size, with various shades and degrees of pigmentation from brown to black or bluish. There was some thickening, and in parts it was finely papular. There were burning sensations when warm in bed. The man declined excision and received no treatment. About a year later part of the patch was elevated and exuding serum, but still there was no metastasis. The man died within a year or two of general diffusion of the disease.

1. THE JOURNAL, A. M. A., July 9, 1904.
2. Crocker: "Diseases of Skin," 1905.
3. Johnston: Jour. Cut. Dis., Feb., 1905.
4. Fox: Brit. Journ. Derm., March, 1906.

5. See, in this connection, Hyde and Montgomery: "Diseases of Skin," 1905.

CASE 4.—Mr. A., aged 77, had had more or less epitheliomatous trouble for fifteen years. Skin of face, neck and hands showed many scaly points and spots and scars of excisions, etc. When seen he had a fungating epithelioma of the left zygomatic malar arch and bone, growing to bones beneath. On the right maxillary ramus there was another large one. On the left lower eyelid there was a small hard epithelioma with erosion and crusting. Treatment was purely palliative. The case was incurable. Cases like the above and the one to follow are the more numerous in records.

CASE 5.—Dr. —, aged 53. Usual florid type. There was in a crusted lesion on the left cheek, a typical cutaneous horn, beneath—an epithelioma, surrounded by greasy scales. On the end of the nose there were waxy sebaceous accumulations, with flat epitheliomatous development in a small colorless mole which had been present for years. Caustic potash treatment was given.

CASE 6.—Mr. —, aged 62. The prepuce was long and had never been retracted. There was a fungous epithelioma, cauliflower like, of the glans. Urine was passed through a crevice in the side of the mass. The inguinal glands were small, hard and hyperplastic. The patient refused to permit their removal. The penis was amputated; a one-inch stump was left. The man was well and at work at last report.

CASE 7.—Mrs. W., aged 40, had a discoid epithelioma on right side of tongue from tooth erosion, constantly kept up. It was thoroughly destroyed with Paquelin cautery. She was well at last report, three or four years later.

CASE 8.—Mr. S., aged 42. The jolt of a car caused him to bite the right side of an already tender tongue. In three months there was extensive involvement of side of tongue and glands of neck. The tongue lesion was not benefited by *x*-rays. The neck disease was benefited, but the patient died three months later of exhaustion and a hemorrhage from neck.

CASE 9.—Mr. G., aged 52, several months before consultation pinched his lip with pipe stem. A pin-head lesion followed which the patient often picked off. Each time it returned larger, finally ulcerating and became a typical epithelioma of the right half of the lower lip on the carmine border. There was early involvement of submaxillary glands. The case was aggravated by the patient's use of some caustic paste. When first seen over half of the lower lip down to the gum was destroyed; there was involvement of the right oral angle and massive metastasis to lymph glands. From the first he refused all operative treatment. He died in about twelve months from beginning of disease.

CASE 10.—A married woman, under 10, three months pregnant. There was a papillomatous cyst of right breast, becoming cancerous. The breast was amputated. Recovery.

CASE 11.—An old woman was seen in consultation. She had incurable carcinoma of the left zygo-malar-maxillary region which had developed in a sebaceous cyst of many years' standing.

CASE 12.—Mr. C., aged 69, had sarcoma of right shoulder girdle, which had developed three months previously in a dark mole over the right scapular spine. It grew rapidly in three or four weeks to the size of a small orange. It was excised by his attending physician, but recurred, and gradually involved the whole shoulder and the axilla. The patient died within six months.

1007 Century Building.

Criminal Abortion; Feticide; Prevention of Conception.—In a paper published in the *Texas Courier-Record of Medicine*, January and February, 1906, Dr. H. C. Ghent, Belton, Texas, discusses these questions and presents the opinions obtained from a number of prominent physicians from all parts of the country. The paper discusses this very vexed question thoroughly, but does not offer a solution of the problem. No phase of the subject is left untouched. The moral, physical, medical, mental and legal questions usually propounded in a discussion of abortion, the status of the fetus in utero, the reasons often assigned as justifying abortion, and the duty of the medical profession in checking the evil are discussed fully.

THE INJURIES OF INDEPENDENCE DAY.

AND WHAT HAS BEEN ACCOMPLISHED IN BALTIMORE TOWARD LESSENING THEM. A FURTHER CONTRIBUTION TO THE SUBJECT.*

ROBERT L. RANDOLPH, M.D.
BALTIMORE.

At the last Atlantic City session of this Association I presented a paper on the subject of the eye injuries of Independence Day, a paper which, I believe, was the pioneer communication on this subject before a body of medical men. Thanks to the admirable work of THE JOURNAL of the Association, I was able to gather much valuable information bearing on this subject. The very fact that three years ago on July 4 nearly five hundred persons were killed, twenty-five individuals were made totally blind, and ninety-five others lost an eye apiece indicates that there is something radically wrong and strongly suggestive of lawlessness in our American civilization. The subject has especially interested me, for every year I have had brought to my notice cases which illustrate forcibly the great folly of the popular way of celebrating our Independence Day.

For example, on July 4, 5 and 6, 1888, there were sixteen cases of eye injury treated at the Presbyterian Eye and Ear Hospital, and on the same days of 1897 there were fourteen cases treated, and in the intervening years there was an average of six cases for every Independence Day. Now and again there has been an outbreak of what might almost be called an epidemic of this class of injuries. For instance, on July 4, 1898, we had a record of fourteen cases at the Johns Hopkins Hospital. In 1899 there were sixteen cases treated at the Presbyterian Hospital, and in 1901 thirteen cases. It should be remembered, too, that a certain number of cases are treated in other hospitals in the city, and then, again, a certain number are treated by other physicians in their private offices. This number would, no doubt, be multiplied many times if the record of every case could be reached. On July 4, 5 and 6 eighty-four cases of this character were observed at the New York Eye and Ear Hospital, a year later forty-two were treated, and in 1905 twenty-two were treated. In 1904 there were sixty-nine cases treated in the leading eye hospitals of New York City. I have collected nearly 500 cases of eye injury, more or less serious in character, caused by the explosion of fireworks, and all these occurred within the last few years. Two hundred and fifty were seen in Baltimore. This may seem a large proportion for Baltimore, but my records go back further in the case of Baltimore than they do in the case of either New York or Philadelphia.

Of these cases, 357 were children and 100 were 21 years and over. There were 3 cases where the child was 3 years old, five cases where the age was 4, seven cases where the age was 5, one case where the child was 2½ years old, and an infant of 3 months. I have gathered enough information to show that some variety of firecracker was usually responsible for the injury, particularly for the very serious ones. Sky rockets and Roman candles, however, were not found to be blameless. The chief injury was one in which at the same time the lids, conjunctiva and cornea were peppered with grains of powder which was usually found imbedded in these parts, and this injury we all know entails considerable suffering and frequently leaves permanent scars. Of these there were 269. In forty cases the injury was

* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

so serious as to make it necessary to take out the eye in seven instances for fear of sympathetic disturbance, while in the remaining thirty-three cases the vision was permanently impaired either by traumatic cataract or by inflammatory changes in the deeper structures.

I am sure there is an ordinance in nearly all of our large cities which prohibits the harmful and pernicious practice of setting off fireworks in the streets. Apart from the danger to person, the danger from conflagration is very evident. In Baltimore there are usually from twenty to thirty fires on July 4, and I believe all of our cities pass through this sort of experience on Independence Day. Last year, on July 4, there were in New York City, 7 deaths, 151 injuries of various kinds and $12,500 damage to property, all due to the explosion of fireworks. In Boston there were 75 injuries, 1 death, and $7,000 damage to property. In Philadelphia there were 3 deaths and several hundred injuries. In St. Louis there were 2 deaths and nearly 200 injuries. In Chicago there were 132 injuries and 1 death. According to the *Chicago Tribune*, for the whole country there were 59 deaths, 3,169 injuries, and $311,217 worth of property lost. What has been done to bring about a change of affairs in Baltimore? Briefly, it may be said, first, that it is very difficult to accomplish anything in a movement of this kind without the aid of public sentiment. Generally speaking, the press has been in favor of stamping out the nuisance, but, with the exception of the *Sun*, no paper has expressed itself vigorously on the side of law and order. There is a fine of $2.00 for selling fireworks and of $5.00 for setting them off in the streets. I laid all of the statistics before some of the *Sun* people, and especially the statistics of those injuries which occurred here in Baltimore and which I had collected from the various hospitals. These things were all embodied in several articles in this paper, which, as is generally known, is one of the strongest newspapers in the country. In this way public sentiment was molded. It was shown that our objections rested on the most solid sort of foundation. Letters to this paper appeared from various sources, but the spirit of reform predominated throughout, with the exception of some discordant notes. Along with these statistics the records of fires on the Fourth were also published. It was shown that the average number of alarms for the year was about four a day, while on the Fourth the alarms ran up to twenty-five and thirty. This means that the fire department was strung up to the highest tension throughout Independence Day.

Next, I laid the whole matter before Mr. George R. Willis, President of the Board of Police Commissioners, who called together the captains of all the districts in the city and gave them the most stringent orders to enforce the law. A certain number of men in citizen's clothes were specially detailed to watch out for those who either sold or set off fireworks. The police have generally looked on this law in rather a frivolous way, but with the knowledge that the public was in favor of suppressing the nuisance and with definite orders from their superiors they exhibited not a little zeal in arresting violators of the law. And it may be well to state here that the position which the police department intended to take in this matter was mentioned in the *Sun* several weeks before the Fourth, not only to emphasize the fact that our way of celebrating the Fourth of July is contrary to law and order, but also to give sufficient warning to the smaller shopkeepers not to lay in supplies of fireworks which they were forbidden by law to sell.

An expression of opinion from the state's attorney to the effect that he intends to prosecute such cases will be at least one way of informing the magistrates that the law is to be regarded seriously. Magistrates have been known to dismiss youthful offenders with a slight reprimand. I think it well, too, that the names of the offenders and the fines imposed be published in the newspapers. For obvious reason this will have a wholesome effect.

The Fourth of July, 1904, showed thirty-five accidents, two of these being eye injuries. At the Presbyterian Eye and Ear Hospital there was not an injury of this character, for the first time in twenty years. The other thirty-three injuries were burns in various parts of the body, and of this latter class there had been, the year before, between one and two hundred. Last year the matter was revived in the same way, and the result was, that in Baltimore, a city of 560,000 inhabitants, there were only six injuries, three of these being eye injuries.

What, then, can a medical man do to cleanse his community of this nuisance?

1. Arouse public sentiment in your favor, and this you can surely do by telling your fellow citizens what the records of their own hospitals and of their own fire department show, to say nothing of records from numberless private sources. This should be done through the columns of an influential paper which is thoroughly in sympathy with the movement. You can do this just as effectively as though you were urging your fellow citizens to take steps to rid the city of a scourge of yellow fever or of cholera.

2. Lay your statistics before the president of the board of police commissioners. After all he is the vitalizing force, the mainspring of the police department. Orders from a man like George R. Willis would be very stimulating to the conscientiousness of a policeman.

3. Lay the matter also before the state's attorney and have him publish his views in the paper to show that those arrested will be treated according to the law and not be dismissed with a feeble reprimand from magistrates.

In this quiet way I believe much can be accomplished by ophthalmologists in every city. I do not believe that the time is yet ripe for national legislation. We will have to educate public sentiment still further on this question and get them used to quiet and sensible Independence Days, and in due season laws may be passed which will prevent the sale of fireworks, even in the so-called "original package."

DISCUSSION.

DR. G. C. SAVAGE, Nashville, Tenn., said that what applies to the Fourth of July in Baltimore applies to the Christmas holiday in his part of the country. There was a time when he had no holiday on Christmas. Before he left home he asked some of his confères as to their experience in this matter in the past six or seven years. Before that time they said they commenced preparing instruments a day before, knowing they would be kept busy on that day with accident cases. Now they have rest. He used to be called on frequently between midnight and morning to attend these Christmas cases of injury. A law that applies to one holiday should apply to every holiday. Law in Nashville on this subject has resulted in his being able to have his holiday. No fireworks are allowed on the streets on any holiday. There was a time when men and boys would line up, one side against the other, and shoot roman candles in war-like fashion, but that condition of affairs does not exist now. The best way to keep a snake from biting is to cut its head off; to prevent injuries there should be no importation of fireworks into this country.

DR. LUCIEN HOWE, Buffalo, N. Y., said that to propose to

stop all kinds of fireworks will cause a great deal of opposition. He thought that if a firecracker of a certain length, say three inches or less, is allowed, there will be much more probability of accomplishing something.

DR. ROBERT L. RANDOLPH, Baltimore, declared that he is not in favor of making any concessions. Anything in the shape of fireworks, in his opinion, should be prohibited, except by special permit from the mayor. In such case they should be set off by trained hands and not allowed in the city limits. Any concession as regards the length of the fireworks permitted, as suggested by Dr. Howe, would be a mistake, in his opinion, for under such a clause it is easy to see how all kinds of irregularities would creep in and the spirit of the law would be violated.

DISLOCATION OF THE OUTER END OF THE CLAVICLE.*

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BOSTON.

In order to emphasize the anatomic lesion in this dislocation and its bearing on treatment, I make this brief report.

A dislocation of the acromioclavicular joint usually means that the outer end of the clavicle is displaced upward and slightly outward. This dislocation is not very uncommon. It occasions varying degrees of deformity and certain disabling symptoms may be produced by it. Ordinarily it is a dislocation which is readily treated by pads and simple retentive apparatus. At times, however, it is impossible either to reduce the dislocation completely or to hold it reduced. Occasionally the deformity is so great as to be very noticeable.

It seems probable from the observation and experience of Krecke, Poirier, Rieffel and Sheldon,[1] 1, that the acromioclavicular ligaments are torn in all cases; 2, that the conoid ligament is sometimes torn in incomplete dislocations; 3, that the conoid ligament is always torn in complete cases; 4, that the conoid and trapezoid ligaments are usually torn in the complete cases.

I record the two following cases and the results of a few experiments on the cadaver:

CASE 1.—A male, aged 24, after having had a fall from a ladder in the gymnasium, presented a dislocation of the left acromioclavicular joint. The dislocation persisted despite the usual treatment with pads, adhesive plaster and bandages. The dislocation was only partially reducible. The deformity was marked. There was about three-fourths of an inch separation between the clavicle and the acromion; that is, between the articular surfaces. There was no especial loss of function.

Operation was sought because of the deformity. About six weeks after the accident a suture of the acromioclavicular joint was made. The material used was linen and catgut. The patient was kept in bed on his back for ten days following the operation. The result was perfect. There remained no deformity and the movement and usefulness of the joint was restored.

CASE 2.—A schoolboy, some 18 years old, was thrown while playing football and dislocated the right acromioclavicular joint. The dislocation could be partially reduced by pressure. An attempt was made to hold the reduction by pads, adhesive plaster and bandages. This attempt was of no avail. The dislocation persisted and was very marked. There was about one inch separation between the articular surfaces of the acromion and the clavicle. There was moderate disability; namely, pain on abducting the arm.

Operation was sought because of the very great deformity and because of the pain. The two bones were sutured by means of aluminum bronze wire. The boy was kept on his back some days following the operation. Subsequently the wire was removed. The arm was used earlier than was wise and the result of the operation was not perfect. The deformity was diminished, but the general result could be classed as poor.

Through the kindness of Dr. Warren, demonstrator of anatomy, I have been able to make three experiments on the shoulders of the cadaver. In each instance the clavicle was fixed in a vise and the blow was directed from above and behind.

In one subject there resulted a fracture of the coracoid and spinous processes of the scapula, together with a slight dislocation of the acromioclavicular joint. There was in this instance no rupture of the coracoclavicular ligaments. In each of the other two experiments only a slight dislocation could be effected by a blow from above after division of the superior and inferior acromioclavicular ligaments, but when the conoid and trapezoid ligaments were divided the dislocation became at once very evident and complete.

CONCLUDING REMARKS.

From these observations and from the evidence afforded by some 15 operations on the living recorded in literature and the experimental work which has been previously done, it seems to me that the conclusion of Poirier and Sheldon are amply justified.

The indications for operative interference are, therefore, comparatively simple, namely, irreducibility and a failure to maintain reduction. The dislocation is irreducible because of the interposition of the torn capsule or of the ruptured trapezius muscle. *The maintenance of reduction is impossible, because of the rupture of the coracoclavicular ligaments.* At operation, therefore, the indications are to remove any interposed parts and so to suture the torn ligaments as to restore the relation of the parts to their normal condition.

I would formulate the treatment of a specific case somewhat as follows: If the dislocation is one of moderate degree, it should be treated by simple retentive apparatus. If the dislocation is extreme, in which case it is probable that the coracoclavicular ligaments are torn, a suture of the parts is indicated. If the retentive apparatus does not hold cases of the first class, then suture should be employed.

Various methods of suture have been used; by wire, by silk and by absorbable material. Different forms of pin have been employed. The placing of the suture seems to me to be of some importance in view of my own experience with one of the cases recorded.

An efficient method of suture may be employed to supplement the usual joint suture.

In order to secure a firmer hold on the outer end of the clavicle a suture should be placed so as to make traction on the clavicle from below in the direction of the coracoacromial ligament. The suture should be passed through the clavicle and the coracoacromial ligament.

The treatment of this dislocation with the patient on the back will, of course, remove the weight of the upper extremity and so assist very materially in the proper healing of the parts.

DISCUSSION.

DR. W. L. COUSINS, Portland, Me., said that in his practice during the past twelve years he has seen about twelve of these fractures, but in no case has it been necessary to resort to the operation described by Dr. Scudder. It has been possible to keep the fractured bone in place either by strapping the arm or by using counter pressure with sand bags. Dr. Cousins ap-

* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. Sheldon, J. G.: "A Careful Review of the Literature of Dislocation of the Outer End of the Clavicle," Annals of Surgery, September, 1903.

preciates the fact that his method will not always prove successful, and in certain cases it may be necessary to use the suture. He reported a case of total dislocation of the clavicle in which the man was caught between two cars going in opposite directions. His right clavicle was totally dislocated and the left was fractured. The treatment consisted in trying to hold the bones in apposition by strapping and by applying a bandage. The treatment failed, and the dislocation recurred as fast as it could be reduced. It then occurred to the physicians to discard all the bandages, put the man in a prone position, and then to use sandbags, applied, one below the elbow to keep it from sliding down, and another above, over the shoulder, at the acromion end to exert sufficient pressure to keep the clavicle in place. The head of the bed was also elevated. The dislocation at the inner end of the clavicle was held in place by a small sandbag, two or three inches in diameter and about a foot long, lying transversely. The man was discharged one month after the accident, completely recovered. According to Stimson there have been ten cases of total dislocation of the clavicle, and Dr. Cousins believes that this is the eleventh, and he would like it to go on record as such.

SURGICAL TREATMENT OF CONGENITAL HYDROCEPHALUS.

REPORT OF A CASE OF MENINGOCELE AND HYDROCEPHALUS.*

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In order to approach the treatment of congenital hydrocephalus more intelligently, it may be well to review, briefly, some of the views of its pathology. Congenital hydrocephalus is a term applied to that affection occurring in infants characterized by an abnormal accumulation of serous fluid within the ventricles of the brain. This tends to increase and usually gives rise to pressure symptoms on the brain, except in those rare cases occasionally seen in which the disease is arrested and the patient recovers without cerebral symptoms. The synonyms are chronic hydrocephalus, internal hydrocephalus, and hydrops ventriculorum cerebri. The so-called external hydrocephalus is quite different both in symptoms and pathology. It denotes an abnormal accumulation of serous fluid in the subarachnoid space[1] and is very rare. It is usually secondary to cerebral hemorrhage or pachymeningitis, or else it is found with some congenital defect of the brain. Such an effusion is passive in character and does not give rise to pressure symptoms.

PATHOLOGY AND ETIOLOGY.

More than forty years ago Hilton[2] strongly contended that the disease was due to the blocking of the communications between the lateral ventricles of the brain and the subarachnoid space. It was he who first insisted on the presence of the foramina that connect the fourth ventricle with the subarachnoid cavity and cited a necropsy of a case of hydrocephalus in which these foramina were closed.

The normal existence of such apertures was at that time doubted by many prominent anatomists. The chief one was described by Magendie, with whose name it has since been associated. The two small openings, one at the right, the other at the left extremity of the lateral recesses of the fourth ventricle, called the foramen of Key and Retzius, also connect this ventricle with the subarachnoid space. Of recent years many investigators seemed inclined to accept the correctness of Hilton's view. Some have likened the accumulation of this fluid to that of ascites, and a similar process has been suggested as to its origin; that is, either obstruction of the venous return or a chronic inflammation, though the former is unlikely. In many cases, the fluid which distends the ventricles of the brain is straw colored, often it is identical with normal cerebrospinal fluid, and again it may contain albumen and resemble the transudation found in other serous cavities. The lining membrane of the ventricles is frequently thickened, and this fact gives color to the theory of a chronic inflammatory condition.

Barlow and Lees[3] elaborate the conclusion of Halliburton[4] and others that the cerebrospinal fluid is a distinct secretion and differs materially from transudative fluids found in other serous cavities. They regard the choroid plexuses as having for their peculiar function the secretion of cerebrospinal fluid. They point out that each ventricle is provided with its own vascular plexus and that those of the lateral ventricles have a double arterial supply, showing their unusual importance. The epithelium of the ventricles where it covers these plexuses changes from a columnar character to a structure resembling that of secreting epithelium. They allege that over these plexuses there is continuous secretion of cerebrospinal fluid, and, consequently, means must be provided for the removal of the surplus. Absorption is impossible because of the anatomic conditions, as the veins are some distance in the interior of the velum interpositum and, of course, absorption can not take place through the arteries. Drainage, then, is the only other method, and this is provided for by the communication between the lateral ventricle and the third ventricle, by the aqueduct from the third to the fourth ventricle, and by the foramina which permit the fluid to escape into the general subarachnoid space. Here it may be absorbed by the veins and lymphatics and while following to some extent the lymphatics and sheaths of the nerves. The small size of the passages of exit from the ventricles provides against a too rapid outflow. The careful experiments of the Stockholm anatomists, Axel Key and Gustaf Retzius, seem to show that these apertures afford the only outlet for the cerebrospinal fluid that may be formed in the ventricles.

In a considerable proportion, if not a majority, of cases of hydrocephalus, the views stated by Hilton and elaborated by others appear at first sight to explain the etiology. There are, however, a number of cases reported by competent men in which such an explanation can not hold, for the communications between the ventricles and the subarachnoid space have been found normal or even dilated. A congenital abnormality in the tissue which secretes the fluid or else a chronic inflammatory condition must account for this class of cases. That all are not due to obstruction of the outflow of the fluid from the ventricles of the brain is well proved by many reported cases of lumbar puncture and by a case reported below in which aspiration of the meningocele was followed at once by disappearance of the hydrocephalus and collapse of the skull.

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* Read in the Section on Surgery and Anatomy of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. On account of the not infrequent confusion of the terms subarachnoid space and subdural space in some of the literature on hydrocephalus, it may be well to call attention to the following anatomic facts: Normally, there is no subdural space (Gerrish's Anatomy, p. 560), it does not contain cerebrospinal fluid and has no communication with the subarachnoid space where cerebrospinal fluid is normally found.
2. "Rest and Pain."
3. Allbutt's System of Medicine, vol. vii.
4. Journ. Phys., vol. x, p. 232.

There are many reasons why the doctrine of Hilton that hydrocephalus is due to obstruction of the outflow from the ventricles may be considered erroneous. The association of the closure of the outlets with the excessive accumulation of fluid in the ventricles does not necessarily mean that the closure was the original cause of such an accumulation. It is probably true that an obstruction of this nature increases the amount of fluid by damming it back, and cases may be imagined—and possibly have occurred—in which a closure of these openings by a tumor is solely responsible for hydrocephalus. They must be exceedingly rare, however, for such tumors are more frequent in adults, while internal hydrocephalus is almost always a disease of infancy and early childhood. The closure of these openings that has been reported in necropsies of hydrocephalic children has, in nearly all cases, been due to inflammation. Knowing that cases of hydrocephalus occur when these openings are patent, or even dilated, is it not much more reasonable to suppose that the same inflammatory condition which provoked excessive secretion of fluid also closed these minute apertures? Or, to put it otherwise, the meningitis which the supporters of Hilton's theory say closes the apertures, so causing hydrocephalus, might also act by increasing the secretion from the ventricles by inflammation of the choroid plexus. This view is the more probable because those cases of hydrocephalus whose origin is undoubtedly due to meningitis may often be relieved by lumbar puncture, thus proving the patency of the apertures of exit.[5] In the case reported below a free communication existed between the ventricles and the subarachnoid space, for the hydrocephalus rapidly disappeared when the meningocele was first aspirated. Later, when the meningocele sac was emptied, the fluid in the ventricles was not affected, the irritation from the previous aspiration having, in all probability, been sufficient to close those minute openings. The large amount of fluid often drawn off in repeated tappings and the failure of most operations establishing a communication between the ventricles and the subarachnoid space would also seem to indicate that *hydrocephalus is due primarily to an excessive secretion from the ventricles of the brain rather than to an obstruction to the outflow of fluid from them.*

SURGICAL TREATMENT.

In the matter of surgical treatment the successes have been so few and failures so many that no definite conclusion can be drawn. The fact that occasionally these cases remain aquiescent and cease to increase temporarily, or sometimes even permanently, shows that there are factors by which the normal equilibrium of this fluid is managed and that these factors are capable of modification either by an increase of absorption or by diminution of secretion. As many cases of hydrocephalus have an obstruction to the outflow from the ventricles, and as it is not possible for absorption to take place within the ventricles, it is quite likely that such occurrences are due to the diminution of secretion rather than to the increase of absorption. Such being the case, it should not be an impossible task to promote a decrease of the activity of the secretion by applying measures somewhat similar to those used in overcoming excessive secretion from serous surfaces in other regions. It has not been satisfactorily proved that continuous drainage will act in the same manner here as on other serous cavities and cause diminution of the secretion. It would seem from analogy, however, that such a course is probable. Hydrocele, for instance, is occasionally cured by mere aspiration, frequently by constant drainage. The relief from pressure caused by evacuation of the fluid induces hyperemia in the lining membrane of the sac, and if the tension is permanently relieved by constant drainage the hyperemia becomes chronic, with the consequent formation of fibrous tissue and partial or complete atrophy of the secreting cells. It seems likely that constant drainage might institute a similar process in the secreting tissue of the lateral ventricles.

Without attempting to review all of the various methods that have been adopted for the surgical treatment of hydrocephalus, those will be taken up which apparently offer a hope of success. Treatment by external compression is of some value, though the brain may be injured by pressure when its covering is rendered inelastic by compression.

Aspiration of the fluid has given occasionally excellent results. Cases have been reported of actual cures following a number of aspirations. The probable cause of such cures is the hyperemia following relief of pressure, and this hyperemia may become chronic if drainage is constant, inducing changes already alluded to. Lumbar puncture, first advocated by Quincke in 1902, has been employed, but has not resulted very satisfactorily. Obviously, internal hydrocephalus which may be accompanied by obstruction of the outflow from the ventricles can not be benefited by this method. The injection of the ventricle with irritating fluid after aspiration is dangerous and unsuccessful. Granting that obliteration of the ventricles could be obtained after injecting them, it would be either fatal or productive of grave disturbances from adhesions, displacement of structures at the base of the brain, and destruction of the adjacent portion of the brain substance that would necessarily follow an irritation of the ventricles sufficient to produce their closure.

PERMANENT DRAINAGE.

The method that appears to offer the best prospect of success in these cases is some form of permanent drainage. Of the various methods that have been adopted no one can be said to be absolutely successful in any great number of cases, though many of them have given an occasional success and promise of greater things in the future.

Henle[6] describes a plan introduced by Mikulicz, the purpose of which is to secure continuous drainage. Mikulicz inserted a gold tube into one of the lateral ventricles and drained away a good portion of the purulent cerebrospinal fluid it contained. The end of the gold tube was provided with a plate to prevent it from slipping into the brain. This was anchored on the skull and the scalp closed over it. The tube was discharged twenty-five days later, and twelve days after this time it was again introduced into the opposite lateral ventricle. The child died six days later. The necropsy showed two large abscesses in the brain. Henle also calls attention to Troje's report at the German Surgical Congress of 1893 in which the glass-wool drainage of Mikulicz had been introduced into a lateral ventricle. Two years after this operation the drainage was in place and the child had improved, though some hydrocephalus still existed. McArthur, of Chicago, has used a tube similar to the one employed by Mikulicz with considerable success.

Sutherland and Cheyne[7] attempted drainage by cat-

5. von Bokay, Jahr. f. Kinderheilkunde, vol. lvii, 1903.

6. Centralb. f. Chir., Sept. 5, 1906.
7. Brit. Med. Jour., Oct. 15, 1898.

gut from the ventricle to the subarachnoid space; a number of strands of catgut being tied together, one end was passed into the ventricle and the other end left in the subarachnoid space. The dura was sutured without drainage. In one case there was some diminution for a while in the size of the skull, but no improvement in the symptoms, and the child died three months later from meningitis. The other cases were not satisfactory. Keen also mentions a patient operated on by similar methods, but without good result. Dr. A. S. Taylor[9] has employed a similar method in five cases, three terminating fatally. Of the remaining two, one patient was living twenty months after operation, another eleven months, with the mental condition better in both cases, though there was but slight improvement physically. He says that in both of these cases drainage became most active in from two and a half to three months after operation. It is probable that at this time decrease of the secretion occurred, for it is unlikely that either the patency of the opening or the power of absorption had increased with time.

Keen used horse hair for drainage, but the case was unsuccessful. He punctured above the external auditory canal, and before withdrawing the hollow needle inserted several strands of horse hair through the needle. Four days later the needle was introduced on the other side and a rubber tube inserted. The fluid was evacuated too rapidly and the patient went into convulsions and died.

Feiss suggested subcutaneous drainage which was used by Turek from 1885 to 1890 without success. Nicholas Senn[10] tried subcutaneous drainage in a case of internal hydrocephalus, but the patient died somewhat unaccountably after several days, though examination showed that improvement seemed to follow operation. He remarks: "The case indicated that subcutaneous is preferable to open drainage and proves conclusively that the cerebrospinal fluid is quickly absorbed by connective tissue elements as soon as it escapes from the ventricles." The practical objection to this method which was employed in two of the operations performed in the case reported below is that the pressure required to force the fluid through a tortuous tract in transferring it from the ventricles to the lymphatics of the neck is too great. There is no question about its being readily absorbed when it reaches the tissues in the neck under some tension, but to force it through a sinus requires a degree of compression that was so great in the case in which I used this method that symptoms of brain pressure would be produced before any considerable amount of fluid could be evacuated. Not only is pressure needed to force the fluid along this tract, but to cause it to infiltrate among the tissues of the neck, for it must be remembered that this alone requires considerable pressure. Furthermore, after continuous infiltration with this fluid in the same area for some time, the tissues will take on inflammatory changes and develop excessive fibrous tissue, which will make absorption even more difficult. For these reasons it would seem that subcutaneous drainage can hardly be successful.

The method that appears to offer most hope is that of continuous direct drainage through some slightly antiseptic material, such as a malleable silver tube, followed, after the secretion of fluid has markedly decreased, by a permanent fistula between the ventricles and the subarachnoid space. A silver tube will produce but little irritation of the brain, and by providing a constant lumen will maintain steady drainage and a fixed size of the skull. Assuming that practically all cases of internal hydrocephalus are due primarily to excessive secretion of fluid in the ventricles—which appears to me most logical—the indications should be first to reduce this secretion to a small amount by prolonged external drainage through a silver tube, and then to provide for the absorption of this amount by the subarachnoid space. In these cases, when the apertures are still open, it might appear that nothing more than prolonged drainage would be necessary, but judging from the case reported below it is quite likely that these apertures may be closed by any slight attack of inflammation or hyperemia, especially as they are in tissues that had already incurred such attacks when the excessive secretion from the ventricles first began. Such being the case, it would be advisable in all instances, after drainage had been carried out as long as necessary, to open the skull over the point of drainage and by breaking up the adhesions of the arachnoid around the fistula establish direct communication between the ventricle and the subarachnoid space. The prolonged presence of the silver tube would have created a permanent fistula so that strands of catgut would hardly be necessary, though they might be inserted out of an abundance of precaution. The dura and scalp should be closed without drainage. By following such a plan the excessive secretion of cerebrospinal fluid could be brought to about normal and communication with the normal area for its absorption—the subarachnoid space—be re-established or increased.

9. Amer. Jour. Med. Sci., August, 1904.
10. Alienist and Neurologist, August, 1903.

REPORT OF CASE.

The case reported below, while not proving anything conclusively, tends to point to the possibility of a cure by the method just recommended if persisted in long enough, and if instituted before material changes occur in the brain and before the skull has become completely ossified.

Patient.—A girl, four months of age, was admitted to Memorial Hospital June 20, 1905.

History.—Both parents were living and healthy, with no history of syphilis or of any constitutional disease in either parent. They were white people of intelligence. She was the second child, there being a girl who died when eighteen months of age from enterocolitis. Both labors were normal. At birth the infant showed a slight enlargement at the base of the skull. This was very small, but increased constantly in size until a few weeks before admission when aspiration of the contents of the meningocele was necessary. This was repeated in a few days, as the sac rapidly refilled. Hydrocephalus developed to a slight extent shortly after birth. At the time of both aspirations, which were performed by the attending physician a few weeks before admission to the hospital, the hydrocephalus was relieved by emptying the meningocele sac. The mother said that the bones of the head collapsed to such an extent as to frighten her. After aspiration, the fluid rapidly reappeared in the sac, the hydrocephalus also recurring simultaneously. Since birth the child had never nursed well and seemed poorly nourished and backward in development. She had frequent attacks of diarrhea and gastrointestinal disturbances. She seemed more stupid than a baby of her age should be, and this condition became more marked with the increase in size of the tumor and hydrocephalus, though immediately after the aspiration she appeared much better.

Examination.—On admission to the hospital the child seemed to be poorly nourished and suffering from gastroenteritis, as evidenced by vomiting and diarrhea. The circumference of the meningocele was ten inches. It was oval in shape, one diameter being longer than the other, as shown in the accompanying illustration. Most of the sac was quite thin and translucent and merged into healthy skin near its base. The head was considerably enlarged, and the fontanelles bulged. The sutures had separated. Dr. C. A. Blanton, professor of

diseases of children in the Medical College of Virginia, took charge of the medical aspect of the case and after modifying the diet and giving appropriate remedies, the diarrhea was controlled and the temperature, which, during the first week of admission ran from 100 to 104, gradually subsided. (Fig. 1.)

Operation.—June 27 she was operated on under chloroform and the meningocele excised. An attempt was made to dissect out the sac, but too much bleeding resulted, so the sac, with its covering of skin, was excised in one mass, great care being taken to avoid loss of blood. A purse-string suture of chromic catgut was then placed along the margin of the bony defect, which was about one-half inch in diameter, and situated at the posterior part of the foramen magnum. When this was tied the tissues at the defect were closely approximated. That portion of the lining membrane of the sac external to the purse-string suture was wiped off with carbolic acid, followed by alcohol and the flaps were united by a running catgut suture. The catgut was drawn rather tight to control bleeding. The flaps were abundant as no attempt was made to trim them too close, it being thought that the superfluous portion would be removed later if necessary. The patient stood the operation well and immediately afterward had pulse of 140, temperature 99, the pulse being 124 and the temperature 100 two hours before the operation.

Postoperative History.—An ice cap was applied to the head and for the next two days the baby convalesced satisfactorily, with the exception of a temperature of 103.5 on the afternoon of June 29, which dropped to 101.2 the following morning. On June 30 the respiration became irregular and it was noticed that the hydrocephalus, which was not affected in any way by emptying the sac of the meningocele, had become more prominent. July 1, four days after the operation, the patient seemed rapidly sinking and respirations were exceedingly irregular, from 60 to 90, pulse about 150. The child was suffering from aggravated brain pressure and was in a profound stupor and apparently on the verge of dying. I then aspirated the right lateral ventricle at the right margin of the anterior fontanelle, merely leaving in the needle and letting the fluid trickle out in order to avoid reducing pressure too rapidly. The fluid was clear and colorless. The patient improved markedly. The next day gentle aspiration was used and still more fluid was evacuated. On July 4 the wound of the meningocele operation was tense and showed presence of fluid. The catgut was cut, which released the fluid that had accumulated in the flaps. The tension of the catgut suture had been too great. Gauze drainage was put in to prevent reaccumulation within the flaps. The wound healed without infection. The hydrocephalus, however, increased.

July 6, measurement showed greatest circumference of the head to be sixteen inches, which was about the size at the time of the operation for meningocele. July 7, it measured sixteen and a half inches. July 8 respiration again became very irregular, and the baby, again sinking into a stupor, evidenced symptoms of brain pressure. The ventricles were again tapped, five ounces of clear fluid being removed. The fluid was clear, but slightly straw-colored at this time, though at the first two aspirations there was no color whatever, the fluid resembling pure water. Measurement taken after this aspiration showed a circumference of fifteen and three-fourths inches. One of the first symptoms of brain pressure manifested was irregularity of respiration, which would appear even before the marked stupor.

July 11 the head increased again in size and was aspirated, six ounces of fluid being taken out, the circumference of the head afterward being fifteen inches. July 16 aspiration was again done, six ounces of fluid being removed.

Second Operation.—July 18 the head measured sixteen and three-fourths inches. On account of the rapid increase in size and the constant reaccumulation of the fluid I concluded to operate with a view to making permanent drainage into the tissues of the neck. This was done July 19, in the following manner: A small curved flap was raised over the right margin of the anterior fontanelle, with its base toward the base of the skull. It consisted merely of the scalp. A small trocar and canula was then introduced in the right margin of the anterior fontanelle and several ounces of fluid allowed to escape. Three pieces of chromic catgut, No. 0, were then introduced through the canula and shoved in so that several inches of each strand remained coiled up in the ventricle. The canula was then slowly withdrawn, leaving the catgut well within the ventricle. The catgut was seized with forceps flush with the scalp to prevent the ends from being pulled out of the ventricle, while the rest of the catgut was drawn through the canula. A long probe was then inserted underneath the base of the flap and slowly pushed down between the scalp and the skull to a point behind the ear and into the tissues of the neck. Here the probe was cut down on and a silk ligature tied over its end and the probe withdrawn, bringing the silk with it. The distal ends of the catgut were tied into the silk ligature, and by pulling on the ligature they were brought out through the incision in the neck which had been made on the probe. With slight blunt dissection a pocket was formed around this incision and the ends of the catgut, after cutting off the superfluous portion, were tucked into this pocket and the incision closed. The curved flap was then sutured in place, no provision being made for drainage. The operation was done under light chloroform anesthesia and was completed in about twenty minutes.

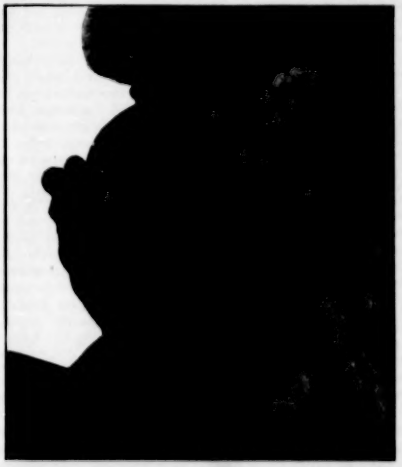

Fig. 1.—Photograph taken two days before operation for excision of meningocele.

Result.—The patient's temperature before the operation was 99.6, pulse 132. Four hours after operation temperature was 104.8 and pulse 140. The day after the operation, July 20, the temperature varied between 99.6 and 102. The head, July 20, measured sixteen and one-half inches in spite of the fact that a good deal of the fluid had been evacuated during the operation on the previous day. July 22 the head measured seventeen inches and was aspirated, eight ounces of fluid being withdrawn. A red line marked the course of the chromic catgut underneath the scalp. This was thought to be due to the irritating effect of the chromic acid in the catgut, as no serious symptoms of infection arose. On July 23 the head measured sixteen and one-fourth inches, temperature was 99, pulse 140, and respiration 45 at noon. On July 25 the head measured sixteen and three-fourths inches.

Third Operation.—It being apparent that the fluid from the ventricle was not draining into the neck, and thinking that it might be due to the fact that the catgut had become swollen and blocked the passage, I determined to try silk, hoping that its capillarity would be serviceable. With this idea a similar operation to that which has just been described as being done on the right side on July 19 was now done on the left, sub-

stituting a large silk thread for two of the catgut strands. It was necessary to use one strand of catgut also, as it was impossible to introduce the soft silk through the canula and to hold it satisfactorily while the canula was being withdrawn without the stiffness of the catgut to support it, so the silk ligature was tied to one strand of No. 0 chromic catgut. With this exception the operation was a duplicate of the one done on the right side.

Result.—The patient stood the operation satisfactorily, but two days later, on July 27, respiration became very irregular and rapid, going up to 75. It was thought that some fluid had drained from the silk introduced at the last operation, though there could not have been a very great amount. Slight suppuration took place from the incision in the neck on the right side about a week after the operation, and it was necessary to open this incision for drainage. The pus was evidently not of a virulent nature, or it may have been aseptic and produced by the irritation of the chromic catgut, for no constitutional symptoms arose. It was necessary to remove the catgut to relieve the irritation. The left side then had the only drainage, consisting of one piece of silk and one of catgut. Infiltration along the line of the silk and in the neck around its end was occasionally marked, though not very great. Unquestionably some fluid drained off in this direction, but it could not have been a very large quantity, for the tension on the head continued and its circumference did not materially diminish.

Final Operation.—August 3 respiration and pulse became very irregular, showing signs of pressure, and a small short trocar and canula were introduced into the ventricle on the right side. The trocar was withdrawn and the canula, which had a shoulder to prevent slipping into the brain, was left in place. The fluid drained away and the head collapsed. The patient showed decided improvement and there were no convulsions or other cerebral symptoms at this or at any other time due to the withdrawal of the fluid. After leaving this canula for two days, a small malleable silver tube, such as rhinologists use to irrigate the sinuses of the nose, was obtained, and its base cut off. A shoulder was made by bending the last quarter of an inch at right angles and partly filing through the tube at the bend until the lumen was reached, so as to prevent possible occlusion of the lumen of the tube at this point. The canula which had been in position for two days was then withdrawn. Its track remained open, and along it the silver tube was inserted. On account of the small lumen of the silver tube it was easily stopped up and it was necessary to open it frequently with one of the fine wires used in hypodermic needles. Care was taken to treat the wound aseptically and to change the dressings as often as they became saturated. This occurred frequently at first.

Result.—A few days after the insertion of the canula the drainage decreased. The head remained about normal size for a child of her age. Her intelligence improved markedly and she would take notice of things, and presented a very different appearance from that when there was almost constantly some pressure from the fluid in the ventricles. She remained in the condition of intelligence that is normal for a baby of her age—a condition she had formerly assumed only for a few hours after aspiration of the fluid and until it would again accumulate.

August 5, her morning temperature was 99.8 and pulse 136, respirations rapid and irregular. At 4 o'clock in the afternoon her temperature was 98.7 and pulse 120. The bowel trouble, which had not disappeared entirely, though by the constant attention of Dr. Blanton it had been kept very well under control, began to grow worse again on August 7. This continued, though the temperature never rose to any marked extent, and rarely exceeded 100. August 9 the bowel trouble became uncontrollable, vomiting set in, and large liquid stools were frequent. The patient up to this time had been doing exceedingly well, but her condition now grew worse. Pulse and respirations were rapid and irregular and could not be accurately taken. Her temperature at 8 o'clock on the evening of August 9 as 101.6. That night the baby sank into a state of collapse, after frequent periods of vomiting and evacuation of large stools, and at 3 o'clock of the morning of August 10 she died. No necropsy was permitted.

There was no trace of inflammation about the silver tube. The head was about of normal size for a baby of her age. The secretion of cerebrospinal fluid had decreased considerably since the tube had been introduced. Death was evidently due to enterocolitis which was aggravated by very hot weather.

DISCUSSION.

DR. J. R. EASTMAN, Indianapolis, declared that the best evidence that drainage is effective in at least a certain percentage of cases of hydrocephalus is that repeatedly the spontaneous evacuation of the fluid through the nasal cavities has been followed by a complete cure. As has been shown repeatedly at necropsy, hydrocephalus may be due to any inflammatory or obstructive lesion. There is nearly always inflammation of the ependyma or of the meninges, or both, associated with obstructive lesions of the aqueduct of Sylvius, or of the foramina of Magendie or Munro. It has also been shown recently that at least occasionally there is an actual obstruction of the veins of Galen. Schultz found an annular constriction by inflammatory bands of these veins which remove the blood from the choroid plexus, an actual passive edema being produced in this way, with overdistension into the lateral ventricle. Somewhat recently, also, these various observers found an actual inflammatory obstruction in the roof of the fourth ventricle, obstructing the foramen of Magendie. But practically always there is inflammation of the ependyma, of the meninges, or of both, the first producing internal and the second external hydrocephalus.

From the standpoint of the surgeon the question is, how can the fluid be withdrawn through an artificially produced fistula, and a communication be established between the ventricle and the subarachnoid space to produce a cure with obstruction between the brain ventricles and the spinal cord. The experiences of Watson Cheyne and of Taylor, Dr. Eastman said, seemed to prove that such a cure, such a complete and permanent withdrawal of the fluid, may be brought about by passing strands of catgut or a small rubber tube from the ventricle to the subarachnoid space in order that the large veins of the meninges may aid the veins of Galen in carrying off the fluid. Dr. Eastman mentioned one case in which he secured a reduction in the circumference of the head of three and a half centimeters after eleven months. Of course, that is only a very slight relief, yet it is a distinct one.

Drainage into the subcutaneous tissues, he said, is not effective because intracranial pressure is lost because of the hole in the skull, a very important factor, one that accounts for the failure of Senn, Horsley and others, who have attempted to withdraw the fluid in this way.

MR. CHARLES BALLANCE, London, England, stated that he has made a large number of postmortem examinations and has performed a number of operations for hydrocephalus. In the first place it ought to be clearly understood how this condition occurs, what are the physiologic functions, and how the fluid is produced in the ventricular cavities and the subarachnoidean space. Modern physiologists agree, he said, that the cerebrospinal fluid is a secretion from the choroid plexus; that with each systole of the heart the fluid is caused to flow out of the ventricles into the great systems at the base of the brain, and that it is then carried up from the cortex to be excreted through the Pacchionian bodies down through the spinal canal. In the first years of life cases of congenital hydrocephalus and posterior basal meningitis occur. In the former there is always an inflammation in the posterior fossa which has caused obstruction of the foramina of Magendie or of Luschka; or else there are adhesions of the cerebellum to the medulla oblongata, which is practically the same thing. That explains how in many cases of hydrocephalus in infants lumbar puncture is of no avail.

There are two ways, Mr. Ballance said, in which we can deal with congenital hydrocephalus. We can try to prevent the secretion of the fluid, or we can try to draw off the fluid from the ventricles. The first method is one that can be carried out by ligation of both common carotids. He has done this in several instances, once in an infant five months old. It cured the hydrocephalus. The head ceased to grow. The second

method is not to drain subcutaneously or externally—which Mr. Ballance believes to be a highly dangerous procedure, and one which almost always ends by sepsis—but to follow the method of Watson-Cheyne and do subdural drainage. In doing this catgut is introduced through the thin cortex so as to carry fluid from the ventricular cavities into the subdural space, where it will be absorbed by the Pacchionian bodies into the superior longitudinal sinus. Mr. Ballance found that this method was not successful and that these strands seldom performed continuous drainage. He therefore used a small fine tube of pure platinum or of fine gold and iridium, these metals not being acted on by the living fluids. The tube is passed in the same manner as are the strands of catgut, through the cortex into the subdural space, the fluid being absorbed by the Pacchionian bodies. That happens in the majority of cases and the patient will get well. In a few cases the head, after about a month's time, will continue to increase in size. He thought in those cases that the tube had become plugged, and that it would be necessary to do another operation. He operated on the other side of the head, intending to put in another tube, but when he opened the dura he found that the first tube was still patent and that there had been produced an external hydrocephalus instead of an internal hydrocephalus. In that condition he did not know what to do.

DR. A. MCGLANNAN, Baltimore, Md., narrated a rather remarkable case of hydrocephalus he saw operated on two years ago. The hydrocephalus occurred in a negro child less than a year of age. The special senses seemed to be perfect, and the motor functions were about normal. The head was opened with the intention of making drainage from the ventricle into the subarachnoidean space, but on entering the skull and incising the dura about 500 c.c. of fluid was found and the skull seemed to be empty, except for the meninges. On careful inspection, however, a very rudimentary brain was found, the basal ganglia, optic tract, a small cerebellar portion and the motor area were present. Dr. McGlannan supposed the condition was an external hydrocephalus. The child died. After removing the head and examining it more carefully it was found that what had been taken to be thickened meninges was in reality meninges with a small inseparable thinly spread out portion of cortical substance on the meninges. The head is now in the possession of Dr. Sabin of the Johns Hopkins Hospital, who is making some elaborate dissections on which she will report later.

DR. SHELTON HORSLEY said that one of the main points in his paper was the report of the case, and several things will be more clear when this case is reviewed more carefully. He operated on the patient several times by various methods and came to two conclusions: First, that the pathology was primarily due to excessive secretion of the fluid into the lateral ventricles and not so much to a blocking or obstruction of those apertures. By establishing a communication between the ventricles and the subarachnoid space one is bound to have an external hydrocephalus if the secretion is very great, because that space can only absorb a certain amount of fluid, and when that fluid has been absorbed, the internal has been converted into an external hydrocephalus, as Mr. Ballance mentioned. Dr. Horsley attempted to institute drainage by inserting a silver tube until the secretion had decreased, that is, until it is practically normal, and then do the operation of Watson-Cheyne by establishing a communication between the lateral ventricles and the subarachnoidean space when the subarachnoid space will take care of the fluid.

"Telecardiography."—A letter from Amsterdam in the *Wiener klin. Rundschau*, April 29, describes a contrivance devised by Professor Einthoven of Leyden with which the contractions of the heart can be registered with extreme precision. It has been found, the writer states, that the contractions of the heart generate electricity and that these can be registered by a very sensitive galvanometer. A cord is stretched between the poles of an electromagnet connected with the two hands of the patient, who can be in an adjoining room. The movements of the cord are recorded on a revolving sensitized film. The telecardiogram thus obtained has five "peaks", and they vary typically in pathologic conditions.

THE REFLEXES OF DENTITION.*

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Dentition has assumed a position of varying importance in connection with the diseases of infancy. There is a period in medical history, perhaps about one hundred years ago, when dentition was considered the most important cause of infantile disease. Almost every disease to which infants are liable was attributed to the cutting of the teeth, and at times, the mortality from dentition alone has been placed at as high a figure as 50 per cent. This view still plays an important part in the ideas of the laity. One hears constantly of heat rashes, of the dangers of the second summer, and one constantly meets with the inquiry on the part of the perplexed and anxious parent, "Is it the teeth?"

There has also been a period of reaction against this extreme view of the significance of dentition. All significance in producing morbid processes has been denied to the process of teething. Dentition was asserted to be a normal physiologic process, like the growing of hair, and the supporters of this view denied that such a normal physiologic process could possibly be the cause of any symptoms. It is probable that neither view is correct. Certainly there is no warrant for attributing all, or even a large majority, of the ills of infancy to teething. As our knowledge of the true etiology of various diseases and symptoms has progressed, it has become evident that in many of those formerly attributed to the process of cutting the teeth, dentition could not possibly be regarded as playing an important part. On the other hand, the view that a normal physiologic process can not possibly be a cause of morbid symptoms, is not in accordance with analogy to other normal physiologic processes, in which it is certain that numerous morbid symptoms can and do occur. Examples of such processes are puberty, pregnancy and the menopause.

It is an undoubted fact that the process of dentition can occur without any disturbance of the health whatsoever. Every one meets with such cases, and perhaps they form the majority in our practice. It is, on the other hand, equally true, that a great many cases are seen, in which diseases or morbid symptoms arise coincidently with the cutting of teeth. The occurrence of symptoms at such a time must be regarded either as mere coincidence, or as evidence of a causal connection between teething and the disease.

A great variety of symptoms and disease processes has been associated in time, and hence in causality, with the process of dentition. Restlessness, fretfulness, crying and disturbed sleep are fairly common. Modern high fever is seen at times. Gastrointestinal disturbances of all kinds are frequently attributed to teething, especially vomiting, diarrhea or colic. Signs of pharyngitis, laryngitis, tracheitis and bronchitis are not uncommon in the teething period. Even pneumonia has been diagnosed as due to the cutting of a tooth. Many nervous manifestations have been recorded at this time, such as laryngismus, spasmodic cough, squint, muscular twitching, tetany and convulsions. Skin diseases of various kinds, dermatitis, prickly heat, eczema and many other rashes have been observed associated with dentition. And there can be found in medical literature instances where such conditions as meningitis, enceph-

* Read in the Section on Stomatology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

alitis, various forms of paralysis, eye affections, ear affections, etc. have been attributed solely to this normal physiologic process.

The etiology of many of these conditions is now so thoroughly understood that we know that they can not be due to dentition, and that, therefore, their occurrence during the teething period must be due to mere coincidence. This being the case, many of those conditions of which the etiology is not so thoroughly understood may also be due to coincidence. The occurrence of such coincidences would not be very remarkable, as every one of these conditions occur also frequently at a time when the process of teething is not going on, and it would rather be strange if they did not occur at a time when it is going on. The cases which do occur at this time naturally make more impression, and perhaps the difficulty of discovering a satisfactory cause, contributes toward pushing the observer into the fallacy, *"Post hoc, ergo propter hoc."*

Nevertheless, the sum of clinical experience does not convince us that all the cases of association of symptoms with dentition is coincidence. Cases frequently occur in which the evidence is strongly the other way, and the repetition of such cases, with an absence of any satisfactory demonstrable cause, has led to the view held by most authorities on the subject, that there are a certain number of conditions which are due in fact to dentition.

This being the case, there has been further discussion as to how a normal physiologic process like the cutting of a tooth actually causes these symptoms. The most simple, complete and attractive theory is the reflex theory. This is based on the numerous anatomic connections of the trigeminal nerve. The teeth are supplied by the branches of this nerve. The superior maxillary division, through its three superior dental branches, supplies the teeth and gums of the upper jaw, while the inferior dental, a branch of the inferior maxillary, supplies the teeth and gums of the lower jaw.

The trigeminal nerve, with its ganglia containing sympathetic and motor roots, is brought into close connection with the facial, the glossopharyngeal and the vagus nerves, and with the nerves controlling the movements of the eyeball and iris, and those controlling the salivary secretion. Also its nucleus in the medulla is in close proximity to other important centers. Through these connections it is an easy matter theoretically to attribute the greatest variety of symptoms to irritation of the trigeminal nerve.

Simple and attractive as is this theory, there are great difficulties in the way of proving it. It is a matter which is practically incapable of experimental proof. The theory must rest entirely on clinical proof. This form of proof is always of doubtful validity. It requires the evidence of many and repeated clinical observations to create even a presumption of causal connection between the clinical conditions observed, and the existing condition of dentition. A large mass of statistics showing the frequency of certain symptoms during teething as compared with that observed at other times, might be of some weight; but there are no satisfactory statistics of this kind. We are obliged to rely mainly on single or isolated clinical experiences, or on general impressions.

Most of the symptoms mentioned as occurring in dentition do not arise with sufficient frequency, and there is no strong evidence in favor of their being in any way connected with dentition. The respiratory disturbances, the skin exanthems and eye affections belong in this class. No one at the present day would regard the association of such definite diseases as pneumonia, meningitis, encephalitis or paralysis with teething as being in any way causally connected with dentition. Their etiology is too well known. There are, however, certain other symptoms which are associated with dentition with great frequency, and which, from their nature, give more plausibility to the reflex theory of their origin.

First, it frequently happens when a tooth is piercing the gum, that a child becomes very restless, fretful, with disturbed sleep, crying out, and sometimes beating its head against the side of the crib. The baby frequently thrusts its hands into its mouth and gives other indications of suffering a great deal of irritation in its gums. There is increased salivary secretion and loss of appetite. These symptoms often occur with such great persistency with each tooth cut, and are so immediately relieved by lancing the tense gum over the crown of the tooth, that there can be little doubt that they are due to dentition. They are not, however, strictly reflexes. The restlessness, disturbed sleep and crying are probably due to the pain which the child is suffering. The increased salivary secretion is probably reflex.

Similar symptoms occur at times, though perhaps less frequently, when no cause for irritation can be found in the mouth. In this case the cause of the irritation probably lies at the root of the tooth; in practice in this class of case gum lancing is not indicated, but rather the administration of small doses of the bromids.

Fever is another symptom frequently seen during the teething period. There may be a moderate rise of temperature, or the temperature may rise suddenly as high as to 105 F. Sometimes this rise of temperature is attended by the symptoms just mentioned, sometimes by no other symptoms. Careful examination fails to determine any other cause for the fever. This symptom frequently occurs at a time when there is not even any visible sign of irritation in the mouth, but seems to be due to irritation at the root of the tooth. The absence of any other cause for the rise of temperature in these cases, and the fact that it recurs when a new tooth becomes active, and subsides when it appears, are the evidences of its being a reflex phenomenon connected with dentition.

I have recently seen a case of this kind. The baby has now cut six teeth. With each one the story was the same. The mother found the baby suddenly feeling very hot, and immediately took its temperature, finding it as high as 104 F. or 105 F. In other respects the child seemed as well as ever, and there was even no loss of appetite. After persisting 24 to 48 hours, the temperature again fell to the normal, and in a short time the tooth appeared, the actual piercing of the gum being unattended with any symptoms.

One of the most important reflexes of dentition is the ear reflex. There occur symptoms of disturbance in the ear arising during dentition, consisting in pain, and sometimes going on to actual inflammation. The frequent occurrence of ear disturbance, and even of otitis media during the teething period is so notable that the fact has probably been observed by every one practicing among infants. There is further evidence. We know that in these conditions of disturbance of the ear, there is actual congestion of the membrana tympani. There is a close nerve connection between the inferior dental nerve and the nerves governing the blood supply of the drum membrane. According to Woakes this blood supply is derived from an artery which leaves the internal carotid in the carotid canal. The nerve fibers forming the carotid plexus at this point are directly connected

with the otic ganglion which also receives fibers from the inferior maxillary division of the trigeminal nerve. Thus there is a direct channel of nerve communication between the tooth and the blood supply of the membrana tympani, and it is easy to see how, as pointed out by Rotch, an irritation about a tooth could cause reflex disturbance of this blood supply.

As to the digestive disturbances, vomiting, colic and diarrhea, the evidence is less clear. These conditions are undoubtedly frequently associated with teething. On the other hand they occur so frequently in infancy that their simultaneous occurrence with dentition through coincidence would not be very remarkable. It is well known that the digestion is easily disturbed by nervous influences, as is evidenced by the conditions of nervous vomiting and nervous diarrhea, from other causes, as heat, cold, fright and various sources of irritation. Even a distinct lowering of the digestive power can be caused by nervous influences, as is seen by the great frequency of digestive disturbances in very hot weather. Cases occur in which a child has been taking and thriving on a certain food under conditions which insure practical constancy in composition of that food. Suddenly, coincidently with the cutting of a tooth, comes a disturbance of digestion, and the infant can no longer take this same food without vomiting, colic, or more often diarrhea. When the tooth appears the digestive powers once more become normal. It seems justifiable to attribute this phenomenon to a reflex of dentition.

Less convincing is the evidence that certain nervous disturbances are due to teething. Muscular twitching, tetany and even convulsions occur during the cutting of a tooth. They are, however, conditions to which it is specially difficult to exclude other causes. While we can not deny the possibility that these symptoms are due to teething, there is little positive clinical evidence in support of their connection with this physiologic process.

To sum up: The commonest symptoms seen in dentition are not reflex, but due to pain. They may arise from the tooth cutting the gum, or from irritation at the root of the tooth. The majority of symptoms attributed to a reflex irritation from the tooth are probably mere coincidence. There is a strong probability, based on clinical experience, that dentition may cause fever, disturbances of the ear and disturbances of digestion. It may possibly cause certain nervous disturbances.

DISCUSSION.

DR. THOMAS M. ROTCH said that there is strong opinion on both sides of this question. A large number of physicians say that they have never seen a case in which a gum should be lanced, and, therefore, that there are no reflex symptoms from this source. Many may live long and yet not see certain phases and manifestations, whether of nervous origin or organic. If a certain number of men assert they have seen such cases we should be influenced by those who have seen as well as by those who have not. There is no question but that the habit in the past of lancing all gums was a mistake and that a gum when lanced will not always relieve symptoms. Again, there are certain cases which call for lancing, and in which the symptoms are relieved thereby. Dr. Dunn has classified these cases very well into those in which the irritation is at the crown and those in which it is at the root. If the irritation is at the crown, lancing relieves; the other class of cases is not relieved. The first class is rare. When one sees a hard, brawny, hot, swollen gum, there is no question but that lancing is proper. Dr. Rotch said that we must believe it has done some good, when we have had a temperature of 104 to 105 and the patient vomiting and refusing food, this going on for days, and in a short time after lancing all these symptoms are relieved and the trouble is over until another tooth comes. The irritation of the next tooth may not be of the same kind and it may not need lancing. In certain individuals he has seen practically every tooth need lancing. He has had parents request that he lance their child's gum, and he has said he did not think it necessary, but they have insisted, saying: "We have walked all night with the baby and do not wish to do it again. We will not wait." In these special cases the gum was brawny and needed lancing. If these things occur once or twice in a physician's practice they must be accepted.

He thinks there are reflex symptoms during the teething period. This can not be proved anatomically, as in the first class of cases, but from analogy and general investigation he feels just as sure in diagnosis as in any of the nervous manifestations in infants which we can not explain. In the unbalanced and undeveloped nervous system of a baby the least little pain or feeling of discomfort will produce symptoms, and this may not only make it cry, but give any kind of nervous symptom, while in the adult it would have no effect. In some individuals a slight toothache will cause severe disturbance, and yet there may be nothing actually organic. So in infancy there may be a symptom-complex when the nervous equilibrium is easily disturbed. Some physicians say, "Oh, it is because you have overlooked some cause elsewhere." Dr. Rotch insists that there are cases in which there is nothing else to show. If there are pulmonary symptoms, rapid respirations, alæ nasi dilated, and signs of pneumonia, and they are entirely relieved on blowing out the Eustachian tube, these are analogous cases, and yet it could not be said that there must be some pulmonary involvement. As the nervous system is so easily thrown out of gear, there may be vomiting, diarrhea, pulmonary symptoms, congestion of the ear, pain, otitis media. All may be proved to be of infectious origin. The fact remains that there is congestion at the time of the development of the tooth. Also, when there is congestion of the middle ear in a baby, with the open petrous suture, and the intimate relation between the meningeal and ear vessels, there may be convulsions, twitching and various nervous symptoms, nothing serious and all passing away with a dose of bromid of potash, reducing the congestion. He believes in lancing when it is shown to be necessary, but not nearly to the extent formerly employed.

DR. A. C. CORTON, Chicago, said that the argument is old. It was not strange when all the disorders of infancy coincident to the period of teething were attributed to teething, greatly to the detriment of the infant, and no doubt increasing the infant mortality, that in the rebound the profession should go to the opposite extreme, until the late Dr. Christopher was in the habit of telling mothers that teething was never known to produce anything but teeth. It is well known that other physiologic processes produce reflex symptoms, parturition, gestation, menstruation. He believed that there has been no disorder attributed to teething that may not have been due to that cause. Pneumonia might be due to teething.

One can not convince a mother that the serious discomfort so manifest in a baby preceding the eruption of each tooth is due to any other cause. Again, if not due to teething, what is it? Indigestion, reflexes from other parts? Remedies have been addressed to digestive disturbance in vain, until finally the eruption of a tooth was soon followed by convalescence. He would say that the trend of opinion is backward toward reflex disturbance of dentition. There are reflex disturbances without anatomic explanation.

DR. VIDA LATHAM, Chicago, said that dentition is not in all cases a physiologic condition. If hyperemia is a physiologic condition, then certainly dentition is. If a section of a child's head during the period of dentition be examined microscopically, evidence of very active hyperemia will be found. The irritant is present by pressure on the nervous system; hyperemia is present, and if continued long enough may result in a diseased condition, even ulceration or necrosis, or the happy termination of resolution. Near the apex, about one-fourth of an inch to one side, may be found an area of round-celled infiltration; after a while these cells become absorbed, and they leave an area of weakness. In other words, the apex of the tooth has a line of weakened resistance; it rotates on its axis and points to the cavity. This can be demonstrated. If neuritis is present there is nothing so destructive to the nervous system of the patient, nothing so likely to to be a cause for produc-

ing inflammation, the lowering of vitality and a profuse salivation by stimulation of the glands, and there results dilated stomach, pressure on the solar plexus and decomposition, either by drowning of the gastric bacteria, so that we have no immunity, or if the patient should have an attack of emesis concentration takes place, possibly an increase in the bacteria, and this can very readily produce a growth of the pneumococcus, meningococcus, streptococcus, which is a common thing, and the breaking up of the mucous membrane gives a mode of entrance. In many cases the lymphatic glands are infected, the nasal mucous membrane may be infected, and sometimes otitis media results. In some cases bathing, stimulation and causing the tooth to erupt relieve the symptoms better than any medicine, except, of course, antiseptics.

It seems, therefore, that we are wrong to say that there is no cause for pathologic reflexes. Again, every child is a law unto itself. In some there is a thickened fibrous tissue, and it is difficult to erupt through; when the bone is heavy and the child well developed, thick-jawed, the difficulties of dentition are great. We must measure every cause by itself. She indorsed Dr. Cotton's idea. From a teething point of view Prof. Christopher was wrong; he was an extremist. A patient who is developing a wisdom tooth will say that it is anything but a physiologic process.

DR. H. M. FLETCHER, Cincinnati, said he could take either side of this question. In other words, being a man and having wisdom teeth, he knew they gave some disturbance. On the other hand, as the physiologists would say, it is a natural physiologic process and should cause no disturbance. Admitting these various symptoms, there must be a cause. How account for a cause? His explanation is in the mechanics of the condition. Take, for instance, an erupting tooth and note how very sharp the lower edge is. When a tooth is erupting and these symptoms are present, he did not think there could be a case on record that would not be found to have bone already absorbed above it. When the child bites its fingers it presses this sharp edge down on the most tender of tissues. Suppose a child in whom the natural processes of life do not go on readily and in whom absorption of the tooth is not what it should be, and there is a hard, dense tissue which does not prevent hydraulic pressure from below, the tooth must expand in some direction. If it can not come up it will go down into the tissues below, which are most delicate. This mechanical explanation might be cited as the real cause of the troubles that come in dentition. They may produce all the systemic symptoms spoken of. This seems to me so reasonable that it is surprising it has not been advocated before. On relief of the tissues above this sharp-edged tooth there is relief of pressure and consequent relief of symptoms. This seems to Dr. Latham the most rational explanation of the symptoms.

DR. M. L. RHEIN, New York, said that the consensus of medical opinion has again turned toward the unquestioned state of affairs. The possibility of dentition being a predisposing cause to almost every pathologic condition is, to some extent, a splendid testimonial to the effect of stomatologic instruction to medical men, because it was very difficult a few years ago to get such a unanimity of opinion on this one point. He believes that the general practitioner could still get some very valuable information on this point. The great point of classification at the outset should be to separate the different sets of teeth, deciduous from permanent, because there is a great difference in the manner in which the deciduous and the permanent sets are erupted. He differed somewhat with the essayist's classification and considered the special dental classification as to crown and root preferable. The root, more especially in permanent teeth, is very little formed at the time of eruption, and the possibility of that being the exciting cause of irritation is very remote; on the other hand, he favored the mechanical explanation in such a case as outlined by Dr. Latham. The pressure of dentition as described by Dr. Fletcher can readily throw the force of irritation back into the jaw, and thus bring about the deceptive idea that the point of irritation is at the root of the tooth, when there is no real end to the root.

Concerning lancing, he said, the profession of medicine went to the other extreme against lancing years ago. That is because lancing the gum, although it may be a point of great irritation, is generally recognized as a great mistake, because it takes but a few hours for that wound to heal and you get harder tissue for the tooth to penetrate than it had before. After a study of the clinical history of what has been done on this subject, he did not believe there is much doubt but that this is the real reason. Hundreds of cases can be cited to prove these statements. Given a certain case in which there is no question that there is an irritative force which is doing great harm, the removal of that cause is undoubtedly called for, but the simple lancing of the gum tissue when there is a considerable distance between crown and tissue is useless. Part of that tissue must be removed in order to produce proper results. When that is resorted to no such failure in result is ever apparent. In regard to Dr. Latham's point as to whether this is always physiologic, Dr. Rhein thought that there is no need for argument that this is necessarily a physiologic condition, but that does not say that every individual is not so constituted that he can go through the physiologic process of dentition without some pathologic phase intervening. That does not necessarily mean that this is not a true physiologic action.

DR. GEORGE V. I. BROWN, Milwaukee, emphasized the point Dr. Latham made. He recalled a case in which he was obliged to remove a large sequestrum from the superior maxilla. The patient had also lost a large portion of the tongue, evidently due to ulcerative stomatitis. This case was diagnosed by various physicians as typhoid fever and various other fevers. Finally one came to the conclusion that the patient had been salivated by mercury given by some other physician. There was nothing the matter with the child except that at some period during the eruption of this tooth there had been a reduced resistance to these bacteria, whereby the bacteria were able to do such disastrous work. The fact that this was a general infection was made clear, because these sequestra included partly developed permanent teeth and deciduous teeth, showing that it was not a progressive condition, as under ordinary circumstances, but one which was taken directly and at once. The clinical summary is borne out by the fact that the first symptoms were chill and fever, the regular symptom of infection. He has had a number of others with much the same result and much the same history. As these deform the face of the individual through complete loss of both sets of teeth in the regions affected, it seems important to diagnose early. This patient showed a blood count of almost normal, hemaglobin over 80 per cent. showing only a transitory condition. She left the hospital the next day, apparently well. So far as this subject is concerned, it seems a wonder there is so much discussion about the results of reflex irritation from dentition, because it is equally ridiculous to assume that the various disorders of childhood, from the simpler ones to spasmodic affections, chorea, epilepsy, etc., are the result of dentition. Individuals are born with these tendencies, and in some individuals slight peripheral irritation brings serious results. The subject balances itself so nicely that it is not necessary to take a radical position.

DR. M. I. SCHAMBERG, Philadelphia, believed that Dr. Dunn was justified in presenting a phase all physicians should consider. They should not jump at conclusions. Inasmuch as dentition may become a pathologic process, it must be kept in mind that many of the phenomena spoken of may result in consequence of dentition. Dr. Latham's point was well taken. Dentition may frequently become pathologic. We may liken the birth of a tooth to pregnancy. It is considered physiologic and at the same time is accompanied by many symptoms, such as nausea, vomiting, etc., and at the time of the birth of a tooth there is a similar condition of affairs to that taking place in labor, an aggravated condition, and frequently it may go on to a disturbance of considerable magnitude. More careful observation by physicians for the cause of the disturbance in childhood is needed, and as soon as there is any question the case should be transferred to the stomatologist for his advice. The specialist in these instances is better able to judge whether the gums need lancing or not. The gums are often lanced by the physician unnecessarily, and when they are lanced they are often not lanced properly. He believed with Dr. Latham that there is a pathologic process which can be found by microscopic observation, hence pathologic symptoms.

THE RELATION OF THE MEDICAL PROFESSION TO THE SOCIAL EVIL.*

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The social evil as an immoral abstraction does not concern the physician except in his capacity as an individual and citizen. The social evil as conducive to disease forms a territory peculiarly his own as a privileged guardian of the public welfare!

At the present moment, however, there is little need of the sign "no trespassing" to guard from approach the pathway across a field deserted alike by the lay and medical traveler as soon as it is determined how near the dread territory of personal embarrassment and distaste it leads. For formality's sake, though no answer is necessary, I ask the question, Why is it that physicians and laymen alike avoid this topic, one of such vital interest from the standpoint both of preventive and curative medicine? Why is it that, when its direct outcome is the dissolution of the home, almost certain disease for the individual, and by no means infrequent death, the social evil is refused the publicity that will insure the protection of the people; and is accorded only that infamous notoriety that will cause the newspaper to sell?

I have said more than once in public that just so long as the American public shows itself willing to tolerate the consequences of the social evil, just so long will it reap the full harvest, and by so doing scatter the seed for a still more afflicted, though far less numerous posterity.

It marks a condition of affairs as old as Biblical history. Adultery was punished with death by the law of Moses; also by that of Lycurgus, the Greek. The early Saxons burned the adulteress and hung her companion on a gibbet erected over her ashes. Under Canute the ears and nose were cut from both offenders. Even New England in earlier days made the social evil a capital offense for both parties. The present enlightened age periodically imprisons the female public prostitute and releases the active male dupe, when apprehended, on payment of a fine, unless he be known to the magistrate as an influential factor in the politics of his district, or mayhap an officer whose oath has been registered to enforce the law, and, therefore, does not come under the necessity of always subserving it. In higher life, male and female, with impunity, assume and discard vows which pledge them to marital purity and loyalty on each and every one of the two to four occasions on which the marriage rite is celebrated.

Well might the modern cynic exclaim:

MARRIAGE IN DUPLICATE!

And these are man and wife!
Each one a remnant of a former "One,"
Cemented fast by purest, holiest love.
Lip burns on lip with ardor's warmth
That kindles in the bosom every fire;
And sanctifies the future into bliss,
That only Satan's hand can turn amiss!

Love thus prëempts her prize!
The matrimonial state is solemnized
By holiest rite and formal sanctity!
"For better and for worse" the troth is given:
And lip meets lip; how then the knees 'fore Heaven!
The union God is called upon to bless!
A union for eternity!—unless
God's part fade out of sight;
And mind and memory, now no longer bright,
Respond alone to angry passion's call!
Where happy two were "One," now "One" is two,
And lost is all of wedlock's rosy hue!
Each separate half mates yet another love,
And renovates its pledge to God above!

Were God like dark Azrael
To laugh at human woe,
No human mind could measure
The humor God must know;
Forsooth His pigmy people
Marry by solemn rite;
Then set aside the ordinance,
Remarry over night!

Only to-day have we before us the sorry plight of hundreds of yesterday's respectable couples the country over rendered awkwardly uncertain by a decree of the Supreme Court of the United States as to whether they are married to their former husbands and wives or to those whom they have since annexed, having first dissolved (God save the mark!) their holy state of matrimony.

Why is it, I now ask, that when smallpox and measles are guarded against by the isolation of the patient and even by placarding the door—not until convalescence has set in, but until recovery is complete—why is it that venereal disease, the most widespread and a thousand times the most costly from the standpoint of social economics, is, with its breeding ground the social evil, not only ignored, but wilfully and studiously passed by as though its victim were the unfortunate among thieves, and you and I the priest and Levite shuffling to the other side? The sole difference rests in the raised hands and averted face and the false modesty of the prude. For no other name can characterize layman or physician who refuses to heed a single instance of innocent infection of a clean woman or child by a moral leper, a member of either sex, who has contracted disease by that means which we so delicately and considerately term the social evil. We may even excuse the layman for shrugging the shoulder and saying, "Why do you always exaggerate this matter?" He has a passion which he is gratifying, ignorant of danger to himself and posterity. This stock phrase hardly satisfies the conscience of the medical man, with his knowledge that 800,000 young men reach maturity every year in this land of ours, of whom a large percentage—not less than 50 per cent.—are or will be infected with some form of venereal disease prior to their thirtieth year.

Last year Philadelphia and New York City each distributed many thousands of tracts warning the public against the dangers of tuberculosis. Why? For fear others might contract the disease who need not, and in the hope and certainty that tuberculosis might thus in time become a memory instead of a condition. What, then, of those diseases in comparison with which the tuberculous number as one to five, and in gravity do not compare, either in their results on us or on our children? If taken in time, tuberculosis can be cured and leave no heritage. Only in those who are, at a given time, physically degenerate or syphilitic is tuberculosis likely. At the worst it only kills, and requires little delay in the killing. Moreover it is not dishonorable to write "tuberculosis" on the death certificate as the cause of fatality.

Venereal disease may also be cured, but often, perhaps in the majority of instances, it is not, owing either to the patient's neglect or to the physician's shortcom-

* Address before the Northwestern Medical Society of Philadelphia, May 7, 1906.

ing. You and I well know how little qualified are the general practitioner and the general surgeon, who see the vast majority of venereal infections and all their constitutional sequelæ, to treat to the best advantage and with the best hope of cure the average sufferer with acute venereal disease. Neither their experience nor the facilities of their office enable them to do him justice. Even those who devote their time to the study of venereal infection freely admit that many cases are beyond their control. Were they not so candid, the internist need merely point to the all too frequent results of former excesses displayed on the case book. We forget, moreover, that venereal infection may also kill—usually after many years—by a slow death. And the cause? Ah, the physician is expected to call the contributing cause the active influence, while the active force is hidden in the cuff of one's conscience until after the funeral, for the sake of the family, or for the name's sake of the corpse! It seldom appears on the certificate or reaches the board of health! If the truth leaks out it is known by the few, is soon forgotten—and we rightfully spare the dead! Venereal disease of the blood vessels in its denouement is termed apoplexy; that of the spinal cord is called locomotor ataxia; that of the kidneys is termed acute or chronic Bright's disease, as the case may be; that of the brain is mollified into softening; that of the epididymis is called female sterility; and who, may I ask, can deny that these terms are accurate or true? Yet what a row of white sepulchres are these same dignified, gaunt, funereal, caballistic hieroglyphs! They cover what they dare not disclose; they injure by their very silence in the neighborhood of curable misfortune or guilt.

May I raise the corner of the curtain? I see first—and as a student of internal medicine I read from case histories that are supposedly not pregnant with venereal conditions—one young man of 38 years under treatment for pulmonary tuberculosis. A few days later he has an apoplexy, which, with his pulmonary lesion, recovers promptly under generous treatment for a former venereal infection. Only a few days before this case I recall a still younger man of 30, requesting treatment for a more popular and less dreaded, but no less serious, infection. In spite of careful instruction and informing literature placed in his hands, that young man infects his eyes, of which the sight is preserved after a strenuous and exciting race between treatment and permanent blindness. The oculist to whom I refer him tells me casually of another young man, at that time in his care, of equally good family and of supposedly equally good moral standing—whatever that may mean to-day—whose infection had spread from the eyes back to the sphenoid cells, there probably to remain until death, the only effective cure, separates the disease and its victim. A lad of 24 has now hardly left my care with the knowledge that, as the result of a venereal infection of several years ago, he has only one chance of children by his affianced wife. If an operation fails to restore the now prized function, he faces the necessity of a frank avowal of his state, or the old story—the sacrifice of the woman to the passion of the man.

These are the experiences of one fortnight in the practice of a student of medicine whose duties would supposedly divert from him the opportunity of contact with venereal disease. In very fact, such patients confide only in their physician, and at times can not be led to the specialist, because the object of their visit is known to all as soon as they enter his door. The genito-urinary specialist can never control venereal disease in all its ramifications, because he comes in contact with only those patients who are intelligent enough to place prompt cure before all other considerations, or such as are forced to apply in the sorrow of despair, while not a day passes in the doctor's office without abundant evidence of the results, and oftentimes the living reality of the almost invariable attendants on the social evil.

DOES THE SOCIAL EVIL AFFECT THE HOME?

Ask yourselves this question as medical men and as fathers. I read from the national census that during twenty years (1867-1886) we have recorded 328,716 broken homes. How many of these were ruptured because of the husband's infection of the wife, no one will ever know! Perhaps it is as well that no one ever should. Every physician knows of more than one such instance, and one is enough to set manhood aflame. To-day approximately 10.5 per cent. of all marriages end in divorce. The physician needs no figures from the census to tell him that many a separation should be granted that is refused, because the true state of the sexual life remains unknown to judge and jury; or to convince him that many a divorce comes as a godsend to an already infected wife who can no longer cherish the transmitter of an eternal woe.

DO THE CHILDREN GO FREE?

Not a few! The hundreds and thousands who die before they see the day, to which they have an immortal birthright—these reach a happier home by a short cut which they have the opportunity neither to court nor to refuse. Not, however, the illegitimate 70 out of every 1,000 children born in this America. These can hardly be said to escape the penalty of the social evil, even though their bodies, perchance, remain healthy and clean; their fatherless and motherless future is a curse beside which venereal infection would rank a blessing, if it included a kind home. Even the blindness, which stocks our asylums with from 10 to 20 per cent. of all their inmates as the result of venereal disease, would be less harrowing were it only innocent in origin. Shall I read the health bulletins of this Quaker city for the edification of those who think we are drawing a dangerously long bow? Does it cause surprise to learn that the records of the past twenty weeks included 27 certificates of death from one congenital venereal disease, only four weeks out of the twenty yielding no reported cases? This recital is of itself a sufficient commentary on the prevalence of venereal disease and, primarily, of the social evil. Each instance implies the same disease in father and mother. And shall I ask you to compare with this meager total the actual number that must have been reported as dying from marasmus and other misnomers, but which should rightfully be attributed to the social evil? In France these figures are kept and given to the people, as they will be here, and the infant death rate in France from venereal disease numbers over 25,000 in a year. The knowledge of these figures would, one might think, deter at least the physician from engaging in the social evil.

DO THE MOTHERS PAY FOR THE SOCIAL EVIL?

I think if the decision were left to the women the men must needs depend on Nature to satisfy her own demands. She is amply able, and never intended that her task should be delegated to any other than the wife and the mother. No physician exists to-day who dares to gainsay this assertion in the face of the consensus of the International Conference of the Students of Venereal Disease (Brussels). Had this congress come

to any other conclusion, a physician's own experience and heart would give it the lie. And yet the teaching on this point has been either non-existent or unqualifiedly bad until recent years. As a consequence, there have been two standards of morals, one of enforced chastity for the woman and one of indulgence for the male, who has avoided the titles of adulterer and prostitute only because the physician has allowed him to pretend he was satisfying, at the woman's expense, an imperative demand of Nature. There are those who still, whether through ignorance or even more culpable carelessness, hold this ground. Only a few weeks ago a boy of the type from which real men are made received such advice from a physician in the town in which he was at boarding school. He came to me to learn if it was necessary to his health to do what his senses told him was a crime.

I submit the price paid by the mother of the home in the terms of those who care for her in her darkest moments. Six of your most prominent obstetricians and gynecologists replied to my question, What approximate percentage of all your operative cases would cover the conditions caused by venereal disease?[1]

Dr. John G. Clark wrote: "It is very difficult for me in an offhand way to give you an approximate percentage of the cases operated on by me which are directly due to gonococcal infection. Of the pelvic inflammatory cases, however, I believe I would be safe in saying that 50 per cent. originated from this source."

Dr. Edward P. Davis wrote: "In hospital patients I should say that from 5 to 10 per cent. show evidences of venereal affections, usually gonorrheal; in private patients, the percentage is much smaller. I recall, however, distinctly, two cases which illustrate the possibility of such an infection among private patients. In one, gonorrheal infection of the vagina infected the eyes of the child, causing a dangerous ophthalmia; in the other case a woman married a man who had syphilis, and who was assured by his physician that he was cured and could safely marry. The result has been the destruction of the fetus in three successive pregnancies and the infection of the wife; the wife's infection was not very severe and has been controlled by treatment, so that destructive lesions have not occurred."

Dr. Joseph Price wrote: "I do not hesitate to say that 90 per cent. of all pelvic suppurations are due to gonococcal infection. In addition to these many other abdominal conditions are due to venereal diseases."

Dr. Charles P. Noble wrote: "Less than 10 per cent." (referring to all operative work).

Dr. Richard C. Norris wrote: "I have come to divide my patients into two general classes—the well-to-do private patients and the dispensary class. Among the latter I would approximately estimate a large majority, probably 80 per cent., as due to gonorrhea. Of the former the proportion is, I believe, considerably smaller, due, not so much to the greater freedom from gonorrhea of the husband as to the fact that a larger proportion of such husbands receive better and more persistent treatment of their disease, and their intelligence being greater, the sum total of infections produced by this class is less frequent and less virulent."

Dr. Barton Cooke Hirst wrote: "It is impossible for me to compute the proportion of cases in my practice due to venereal infection. In a general way, I should say that this proportion is much lower among the upper classes than among the poor. I find among my private patients a very small proportion indeed of venereal infections. I should say that less than 8 per cent. of my inflammatory cases in the better class of private practice are due to this cause. In my dispensary and ward patients the percentage rises enormously. The majority of inflammatory cases I believe to be due to gonorrheal infection. I should be disposed to put the proportion at something like 75 per cent."

1. It will be observed that two of the six reported on general gynecologic operative work, while the other four limited their estimate to pelvic conditions.

My friends, if these figures carry on their face the proof of immoral male tyranny, let us make the most of them!

DOES THE BODY POLITIC SUFFER FROM THE SOCIAL EVIL?

Does the tree suffer when the worm is busy at the root? Does America most need her 14,000,000 young men in a healthy, active state for business and defense, or can she use them to equal advantage when crippled, sterile, or infectious to others, or suffering from this trio born of the devil's malice toward man?

Does it mean anything to a nation's prosperity that at some time before adult life at least half her young men are laid aside for a time owing to venereal disease, and become the means of incapacitating others; that some receive permanent disabilities; and that not a few are rendered industrially useless? Does she suffer from one year's (1900) census mortality of 1,591 (934 males, 657 females), a mere fraction of the unreported total? Does she pay a heavy tax when a large percentage of those infected, men and women, become sterile, permanently and perpetually disabled from propagating their kind? Does it count that these diseases are responsible for many of the insane and the blind? Does she find cause for regret that the immoral element takes bodily hold of politics and rules the town? This state of affairs pertained in Philadelphia only a few months since. And does the community learn with surprise of a needless annual outlay of public funds in that in 1904 there were treated at the Philadelphia Hospital of males alone 791 unnecessary cases of venereal disease as such, and in 1905, 663 males and 175 females; while in the medical and surgical wards were as many, if not more, in a chronic state?

WHAT CAN BE ACCOMPLISHED IN THE CONTROL OF THE SOCIAL EVIL AND VENEREAL DISEASE?

Everything, if every physician will but lend a hand; a great deal, with the few who are already openly able and willing to help. The effort is repaid if one boy or girl is thereby saved from venereal and moral infection. Would that there were no one in the medical profession who felt it necessary to see this movement become popular before offering his active approval! There are, indeed, practical methods, and following are a few that have been tried and have stood the test.

First and Foremost.—The physician is responsible for a sane understanding of the normal sexual functions among his own clientele. He can impart this knowledge to the individual, male and female, either in his office by word of mouth or through literature; but if necessary he has the lecture room at his elbow. One or the other method should be employed. The fantastic notions and the ignorance of otherwise intelligent adults regarding the normal sexual phenomena and the proper care and respect for their genital apparatus is not a high tribute to our supposedly unremitting thought for their welfare.

Second.—Almost equally important is the instruction of fathers and mothers regarding the prevalence of the abuse of these functions, the reasons therefor and the consequences, including the statistics of the insane and blind asylums and of venereal disease, and the communicability of the latter. These data furnish the only argument needed to do away with the double standard of morals for the man and woman. The woman suffers more and should, if either, have the greater moral license. The prevailing cry is, "Spare our children the

need of learning these facts." You have been sparing them, my friends, for many a year, and your children are now grown. In spite of your consideration, or because of it, all they have learned is a smattering of the truth, usually in an inaccurate, unhealthy, unclean way, in jest or in song, from the stableman or the nursery-maid. The guttersnipe is far more apt in gaining the ear of your boy than his pastor; his lesson sinks deeper and is more lasting! The consequences, you must admit, deserve attention. Have you another remedy to suggest, or will you test the one offered? Will you tell him clearly that which he has a right to know about himself, or shall he hear the distorted story, as he surely will, from the hostler or the schoolboy degenerate? Shall the mother advise her girls of their high privilege in life, or shall they learn first of these things in gossip, or, as sometimes occurs, from an infected and infectious husband? I heard a noted gynecologist exclaim only a few nights ago, after operating on a beautiful girl, "My God! I'd rather my daughters should never marry than see them on the table like that! And yet how can I prevent it?" he added. When I heard this cry I said again to myself, "The women, at least, must be given the opportunity of knowledge, and the right to intelligently choose between the diseased and the clean."

Third.—The criminal false modesty and prudery that has led and almost forced the medical profession to conceal the prevalence of venereal disease should be exposed, and must yield to measures calculated actively to protect the public. If disease is in our midst, and if innocent infection is possible owing to ignorance of the possibility, and largely preventable when the facts are known, then all but true modesty must step aside, or the physician shoulder the blame.

Fourth.—Societies are being formed the country over of which the privileges of membership are extended to the laity of both sexes, who are invited and urged to aid in the work. A new field opens for women, both lay and medical, which men can not cover. These societies should be local organizations, with the needs of the individual city or town as the immediate object in view. They can, if they desire, send delegates to a national organization.

The names of these societies should plainly indicate their purpose, and display none of the false sentiment for the dissipation of which they sprang into existence. Such organizations already exist at home and abroad for the "Study and Prevention of Venereal (or Social) Disease." Their work should be essentially educational. If legislation ever becomes possible it will only be through an enlightened public whose knowledge at present amounts to the densest ignorance. My city is for the first time considering instruction in the principles of normal sexual hygiene in the colleges and schools, one of the brightest signs that the ground has been broken for the sowing.

Sixth.—In all public and private expositions of the subject there must be strict emphasis laid on the dignity and nobility of the pure sexual life as a God-given privilege.

Charges of exaggeration and fanaticism are the inevitable attendants on every movement that inconveniences a portion of mankind. Substantial ground should never be afforded on which such claims can stand. The statistics of the social evil and venereal disease are of such magnitude that they require no amplification.

CONCLUSION.

We can not cleanse the world of venereal disease in a day or in a lifetime. It can be accomplished as surely as any other right problem, and as certainly as that of tuberculosis, which, we must recall, was also impossible only ten years ago. A small beginning may have no end. Conviction and sane enthusiasm will win over many who are now opponents to the cause. There will be enough work for each father and mother in the individual home, no matter how clean; that work should rest on the family Bible handed from father to son.

There will be more than any one physician can accomplish in the safeguarding of his patients from harm. He should never give them the opportunity to curse him for their ignorance of facts to which they have a clear title.

Enough has been said to convince the most reluctant that earnest men have engaged in a struggle to the finish, and that your duty and mine is to be up and doing, unless we would learn of America, as is true of France, that the death rate exceeds the birth record, and from the same causes—alcohol and venereal disease. Medical men are walking with eyes wide open along the edge of a slough of despond so treacherous and so pitiless that the wonder can only be that they have failed to warn the world away. Not a signboard! Not a caution spoken above a whisper! All mystery and seclusion! Gatherings strictly medical, the stenographer excused for the occasion, a brief notice in the medical journal, and, as a result of this studied propriety, a world more full of venereal infection than of any other pestilence, and no other existing so regrettable and so unlikely, under the present régime, of ultimate escape.

It becomes plainly your duty and mine to educate, first, the physicians who are ignorant of or carelessly deny the facts; and, secondly, through them, to arm the fathers and mothers so that they may guard our girls and boys. One generation of preliminary, elementary education—that education which Devine characterizes as the "one unquenchable hope of those who care profoundly for their fellow-men"—and we will have at our sides or in our places a body of public-spirited citizens who will not only make the attempt, but will storm the citadel of this social evil. I am not one of those, as you already know, who doubt the ability and ultimate purpose of man's Maker with regard to this moral and physical disease. We have only too recently had evidence that we do not begin to estimate His power. It is certain that there will be small need for its exercise if mankind will for the first time decide to aid the Almighty with their best effort.

Already the women of this country are receptive and are being prepared. They suffer most as the result of the abomination, and, if their men will not cure it, theirs is surely the right of self-preservation. Who dare deny it to them? Certainly not the men who have been feeding the flame! With each new day I believe more heartily that the control of the social evil and of its consequences will be attained through and by the women, and by the elementary sexual education of both sexes in the home and over the family Bible. When the time arrives for the American woman to realize her full power, even to the point of forcing her sons and husbands to be clean, and to live true to the ideals of American manhood and womanhood; in that day will have been accomplished the restoration and preservation of the American home altar.

"Happy he with such a mother
Faith in womankind beats with his blood;
And trust in all things high comes easy to him;
And tho' he trip and fall, he shall not blind his soul with clay."

THE STUDY OF "ROCKY MOUNTAIN SPOTTED FEVER" (TICK FEVER?) BY MEANS OF ANIMAL INOCULATIONS.*

A PRELIMINARY COMMUNICATION.

H. T. RICKETTS, M.D.

CHICAGO.

I arrived in Missoula, Montana, April 21, 1906, equipped for the bacteriologic and hematologic study of the so-called Rocky Mountain spotted fever and for the study of the infectious agent by means of animal inoculations.

Although the period during which the disease occurs is very limited and the cases very few, it was possible to carry the investigations to a point which affords encouragement for the ultimate solution of some of the problems involved. At this time I wish to give a brief and preliminary presentation of the most important results obtained this year, reserving for a future date a more detailed interpretation of the experiments, when the bacteriologic and histologic studies will have been completed.

It will be remembered that the confidence which was at first manifested in the report of Wilson and Chowning concerning the presence of a piroplasma in the blood and erythrocytes of infected patients was greatly shaken by the observations of Stiles, who, after prolonged study, was utterly unable to confirm the piroplasmatic nature of the disease.

From these conflicting reports, it seemed very probable that the specific organism, if present in the blood, must be one which is difficult of determination, and for the demonstration of which special experimental methods must be used.

The first essential point to be studied concerned the situation of the specific agent in the body. Considering the subject from an unprejudiced point of view, it was necessary to recognize the possibility of the microbe having a local situation, the general disturbance being caused by toxins which are absorbed from the point of primary infection. This possibility was considered somewhat improbable, however, the characteristic and generalized eruption speaking for a systemic rather than a local infection. On this account, my attention was directed chiefly to the blood from the start.

After a fairly exhaustive search of the blood in stained and unstained preparations in two cases, I was unable to identify a parasite positively either within or without the erythrocytes. Similarly, aërobic and anaërobic cultures of the blood, made in bouillon and on agar plates of differing reactions, gave negative results with one exception. In the one exception mentioned, a staphylococcus grew in a flask of bouillon which had been inoculated with from 3 to 5 c.c. of blood drawn from the patient, Landon.

In view of these negative results, it was decided to proceed at once with animal inoculations, although the microscopic examination of the blood and culture experiments were continued as new cases developed.

EXPERIMENTS ON RABBITS.

On April 27, two intravenous inoculations were made into rabbits. In one instance, 1 c.c. of defibrinated blood from the patient, Stevenson, was used, and in the other 4 c.c. of defibrinated blood from the patient, Landon. The Stevenson blood was 17 hours old and the Landon blood 24 hours old at the time of injection, the blood having been kept in the ice chest except for the first few hours occupied in transporting it to the laboratory. The animals appeared not to be disturbed by the injections in so far as weight, temperature and demeanor indicated, and nothing of a positive nature was learned from the experiments.

On May 6, 5 c.c. of defibrinated blood, 22 hours old, from the patient, Cortsen, were injected intravenously into a rabbit weighing about two kilos. No disturbance was noted for four or five days, when the temperature rose to 104.8, but remained above normal for no more than two or three days. The experiment was not considered satisfactory.

EXPERIMENTS WITH GUINEA-PIGS.

Turning to the guinea-pig, a supply of which had been received in time for inoculations with the Cortsen blood, astonishing and strikingly positive results were obtained. On May 5, when the Cortsen blood was six and one-half hours old, one guinea-pig was given 3 c.c. and another 5 c.c. intraperitoneally. One of the animals died in 7 days and the other in 11 days. It was necessary for me to be absent from Missoula for two or three days following the inoculations, but on returning I found in both a temperature which ranged between 104 and 106 F. After the fifth day both animals became emaciated rapidly, and for from 36 to 48 hours before death the temperature was subnormal. In guinea-pig 1, the scrotum and testicles became enormously swollen, and on the sixth day the skin of the scrotum was occupied by large dark-colored hemorrhages of irregular outline. Subsequent experience showed that this swelling of the testicles and scrotum and the hemorrhage into the skin of the scrotum is the most characteristic sign of the disease as produced in the male guinea-pig. Cultures of the Cortsen blood, and also of the heart's blood of the guinea-pigs after their death, remained free from discoverable growth.

A second generation of three guinea-pigs was inoculated with the heart blood and splenic emulsion from the two animals which had died. Of the second generation one died, having the characteristic scrotal hemorrhage and swelling, and the other two recovered after a course of high fever and emaciation. From the fatal case inoculations were made into a third generation, the members of which did not become noticeably sick. In all fatal cases cultures of the blood on plates gave no visible growth.

Although these experiments can leave no reasonable doubt as to the actual transference of the infection, further work seemed to be threatened by the inability to keep the infection going indefinitely in the guinea-pig.

On May 20, blood from the patient, Porter, was inoculated into two male guinea-pigs, one of which died in seven and the other in eight days, both cases running typical febrile courses, and showing the changes in the scrotum already mentioned. Cultures of the Porter blood and of the heart's blood of the fatal inoculations remained sterile.

A second generation of male guinea-pigs was injected from each of the fatal inoculations of the first generation. The two members of the second generation became very sick, running typical courses of fever which reached 105.7 and 105.8, but recovery appeared to be complete on the tenth day in each case, at which time the temperature had returned to the normal. Here, too, attempts to perpetuate the infection by direct transference failed.

* This work has been done in part under a grant made by the American Medical Association through the Committee on Scientific Research.

On June 11, blood from the patient, Bradley, whom I discovered accidently near Stevensville, was utilized partly in repetition of previous experiments, but chiefly to determine the filterability of the virus and its distribution among the constituents of the blood. For this purposed a sufficient quantity of the blood was centrifugated for 45 minutes at an estimated speed of 1,500 revolutions. The serum was drawn off and 6 c.c. were injected intraperitoneally into a guinea-pig. An additional amount of 6 c.c. was passed through a small Berkefeld filter under low pressure, the total amount after the filter was washed out with salt solution being between 10 and 12 c.c. This amount was considered too large for a single injection, hence it was given to another guinea-pig in two injections separated by an interval of two hours. The erythrocytes, and, of course, leucocytes, which remained after centrifugation, were now washed three times with sterile salt solution, raised to the original volume by means of the same solution, and 6 or 7 c.c. injected intraperitoneally into another guinea-pig. To complete this experiment, the unaltered defibrinated blood was injected intraperitoneally into another guinea-pig. Without giving details as to the course of the disease in these animals, the results were, briefly, as follows: Fresh defibrinated blood, washed corpuscles and unfiltered serum produced typical and fatal infections in the guinea-pigs inoculated with them, whereas the filtered serum had no discoverable effect, the animal at no time showing a temperature, even up to the present time.

RESULTS IN EXPERIMENTS.

The results of these experiments were somewhat surprising since the failure to recognize the organism microscopically had suggested the probability that it was of exceedingly minute size and might be readily filterable. I would not assume that filtration is impossible, but simply state that it did not pass through the filter under the condition of experiment. These experiments prove, then, that the condition produced in the guinea-pig is an infection and not an intoxication, for otherwise the filtered serum undoubtedly would be as toxic as the unfiltered. In view of the infectiousness of the serum they also prove that the infecting agent is far from being an exclusive corpuscular parasite; and they suggest very strongly that the organism is of such size that its ultimate and positive recognition with the microscope may be hoped for reasonably. It is recognized that these results do not agree positively or decisively against the piroplasma theory, since piroplasmata may well be in the serum as in the erythrocytes. But they do seem to throw some doubt on this theory, since the serum was almost as virulent as the erythrocytes. On the other hand, it can not be argued that because the washed corpuscles were highly infectious that the erythrocytes actually are infected. One could as readily assume that the organisms were in the leucocytes, or that they were entirely extracellular, a certain proportion of them having been thrown down in the centrifuge together with the corpuscles.

Another important point brought out by these inoculations with the Bradley blood is the fact that the guinea-pig, at least in some instances, suffers from a more or less extensive macular and confluent eruption which is in addition to the scrotal hemorrhage. This had been missed in the earlier experiments, partly because of its unsuspected distribution. After observing that such an eruption occurred chiefly on the dorsal aspect of a monkey inoculated by Dr. King, being entirely absent from the abdomen and chest, I shaved the entire skin of a guinea-pig which had died of the disease, and found the dorsal and lateral aspects of the body, face and extremities marked by many reddish mascules, whereas over the face and buttocks there were confluent hemorrhages. Subsequent observation on other guinea-pigs shows that this eruption is of frequent, though perhaps not constant, occurrence.

EXPERIMENTS ON MONKEYS.

I ordered monkeys as soon as I had decided to begin animal inoculations. The season of the disease being short and the situation more or less critical, it was thought best not to jeopardize progress by neglecting the use of an animal so closely related to man. After unfortunate delays and misunderstandings these animals reached me in time for inoculation with the blood of the patient, Porter.

On May 20, a healthy and fairly large Rhesus, weighing about three kilos, received intravenously 10 c.c. of defibrinated blood from the patient, Porter. The blood at this time was about 28 hours old, this period representing the time required to transport it from Hamilton, 50 miles away. During this time the blood had been kept at outdoor temperature, about 15 C. On the evening of the second day the temperature of the animal rose to 104.6 by rectum, and from this time until the tenth day it ranged from 103.1 to 105.3. On the tenth day it fell rather suddenly to 101.1, and the animal gradually regained his former healthy condition. From the fourth to the eighth day he appeared very sick, was extremely weak, ate very little, the face was cyanotic and the conjunctivæ were infected. The cyanosis and injected conjunctivæ are recognized as characteristic symptoms of spotted fever as the disease occurs in man. The duration of the sickness also approximated that seen in man. The incubation period was shorter, however, as in the guinea-pig.

When the disease is fatal in man, death usually occurs on from the seventh to the ninth day; and, although patients occasionally die after having weathered 14 or 15 days, one who survives the tenth is given a guarded favorable prognosis. The most characteristic sign of the disease as it is seen in man, i. e., the generalized reddish macular eruption, was not observed in this animal. During his sickness the eruption was sought for principally on the chest, abdomen, arms and legs, where there was the least hair, and the skin in some places was of a transparent pink color. The absence of the eruption does not, under the circumstances, render the diagnosis of spotted fever untenable. Those who have had the greatest experience with the disease in man recognize a mild type in which the characteristic eruption is absent. In such cases, the diagnosis rests chiefly on the sluggish circulation, general cyanosis, reddened conjunctivæ, drowsiness and lack of complaint on the part of the patient in spite of retained intelligence, the course and duration of the fever, slow convalescence, and the season of the year in which the disease occurs. Furthermore, those who are familiar with experimental inoculations in animals have long since recognized the fact that in many diseases, desirable as the result is, one may not be able to obtain in an animal a complete duplication of all the symptoms seen in man, in spite of exquisite susceptibility on the part of the animal. The receptor theory of Ehrlich has rendered such variations altogether intelligible.

My second inoculation of the monkey was made on

June 11 with the defibrinated blood of the patient, Bradley. This patient was discovered by the merest accident, on June 9, near Stevensville, where I had gone for the purpose of exploring an infected district with Dr. Fessler. On the following day from 60 to 70 c.c. of blood were drawn from a vein of the arm by means of sterile apparatus kindly loaned by Dr. Brice, the attending physician. The patient was in the tenth day of the disease. After defibrination the blood was placed on ice until the following day, when it was possible to return to Missoula.

The animal inoculated was a small female Rhesus, weighing less than two kilos and apparently perfectly healthy. Eight cubic centimeters of the blood were injected intraperitoneally. The animal ran a course of fever similar to that of the first monkey, but died on the ninth day, after a short period of subnormal temperature. In addition to the cyanosis of the face and ears noted in the first monkey, the hairless skin of the perineum became brilliantly red, although at no time were hemorrhages detectable. The skin of the abdomen, chest arms and legs remained free from spots or hemorrhages. No cause of death, other than spotted fever, was found at the autopsy, no peritonitis had followed the injection and a plate culture of the heart's blood showed no visible growth after five days of incubation.

A second monkey and three guinea-pigs were inoculated with the spleen and blood of the dead animal as soon as possible after death. One guinea-pig died of peritonitis following perforation of the bowel with the needle. The other two are at present running temperatures which correspond to that seen in previous inoculations of the guinea-pig, and in one the scrotum shows the characteristic enlargement. The monkey of the second generation has a temperature which has gone as high as 106.7, the perineum shows the redness seen in the monkey of the first generation, and the hemorrhagic eruption has appeared on the scrotum, buttocks, legs, back, etc. The appearance of these phenomena in the second generation of animals leaves no doubt as to the success of the inoculation with the blood of the patient, Bradley.

I may refer here to a most gratifying result obtained by Passed Assistant-Surgeon W. W. King, of the Public Health and Marine-Hospital Service. Up to the time of the inoculations with the Bradley blood, Dr. King had confined himself to the microscopic study of the blood. He had been no more successful, however, in this search than I, and, having obtained a monkey and some guinea-pigs, I readily assented to his proposal that he repeat some of my experiments with the hope of confirming them. For this purpose I shared with him the blood of the patient, Bradley. We drew lots for the route of inoculation, the subcutaneous falling to Dr. King and the intraperitoneal to me, as stated above. The monkey inoculated by Dr. King died two days later than mine and showed a marked hemorrhagic condition of the skin of the scrotum and penis and the flaming erythema of the perineum seen in my monkeys, together with a mixed macular and confluent eruption, hemorrhagic in character, which was distributed chiefly over the external aspects of the arms, legs, buttocks and back. The face and ears were extremely cyanotic. No exanthem could be discovered on the chest and abdomen. A guinea-pig also inoculated by Dr. King with the Bradley blood ran a typical course, presenting the enlarged and hemorrhagic scrotum, the exanthem already observed by me, and in other respects confirming the results of my inoculations.

White rats and mice arrived so late that they could be used in but one case; the disease was not reproduced in them.

SUMMARY.

The essential anatomic findings in the guinea-pig at autopsy consist of the cutaneous phenomena described, the enlarged and hemorrhagic scrotum in the males and some swelling of the testicles with pronounced congestion of the epididymis, retention of urine, distension of the seminal vesicles, congestion of the kidneys and suprarenals, swelling and congestion of the spleen and liver, and a right heart and venous system which are enormously engorged with blood. No meningitis nor localized inflammations have been observed, except in two instances in which the skin of the swollen scrotum had become gangrenous, with a consequent staphylococcus infection of the underlying cellular tissue.

In the one monkey which has gone to autopsy so far, nothing was found macroscopically, in addition to the cutaneous phenomena, except a congestion of the parenchymatous organs.

That spotted fever has been transmitted to the guinea-pig in my experiments is shown by the following data: The fever, duration and cutaneous phenomena resemble very closely these conditions as seen in man. It can be transmitted into the third generation by direct inoculation from one animal to another, but has not been carried beyond this point up to the present. The condition produced has been an actual infection rather than a transferred intoxication, because it can be passed through the second generation of animals, and because the filtered serum which would certainly contain any soluble toxins which might be present causes no disturbance. In further confirmation of the statements just made are the facts that no other cause of death has been found, and that it has not been possible to cultivate any micro-organism from the heart's blood in fatal cases.

For similar reasons it is believed that the transmission to the monkey can not be disputed.

I realize that the material on which these conclusions are based is rather scant, but the experiments have been rigorously controlled, and I feel that they are safe.

The hope is still entertained that it may be possible to keep the infection alive in experiment animals by suitable manipulations in order that many other problems bearing on the disease may be taken up properly. I am at present trying to do this by alternating the infection between the monkey and the guinea-pig, with the hope that the character of the virus may be so altered that the infection may be passed directly from one guinea-pig to the other indefinitely. With this result in hand attempts toward the production of a vaccine may reasonably be made.

The discussion of other features of the disease will be reserved for the present. I shall only refer to the theory of transmission by means of the wood-tick, by expressing my disagreement with the conclusion of Stiles that the tick theory falls with the piroplasma theory. The tropical "tick fever" goes to show that ticks may harbor and transmit pathogenic parasites other than piroplasmata.

For the privileges of the laboratory of the Northern Pacific Hospital and of the hospital itself, I am under the greatest obligation to Dr. W. E. Spottswood, surgeon-in-chief, without whose active interest much of the work of this season could not have been undertaken. I also express my thanks to Dr. Chowning, since I profited

greatly by his previous experience in the field, and to Dr. King, who, after the departure of Dr. Chowning, gave me the most generous assistance in the inoculation of the animals.

The contributions of the Montana State Board of Health and of Missoula and Ravalli counties, through their commissioners, are gratefully acknowledged.

ROCKY MOUNTAIN OR SPOTTED FEVER.*

HARRY N. MAYO, M.D.
SALT LAKE CITY, UTAH.

DEFINITION.

An acute infectious disease characterized by a somewhat sudden onset, with purpura hemorrhagica, terminating by lysis in from two to seven weeks.

ETIOLOGY.

The disease is also known as tick fever and occurs, as far as known, in Montana, Idaho and Wyoming. It seems to be more common along the course of the Snake River than elsewhere. Some attribute the disease to the bite of a tick which is one of a class of Acariden arachnids which attaches itself to the skin of man and other animals in which it buries its head and sucks the blood.

Spotted fever is prevalent among bridge builders, carpenters, civil engineers and men of like occupation who are employed in building railroads, bridges, canals, etc. The theory is that these individuals sleep on the ground and are exposed to the bite of the tick. Whether the bite of the tick has anything to do with the disease or not is yet to be proved. It is a fact, however, that many of these patients have ticks on their person or give a history of having been bitten by the insect.

MORBID ANATOMY.

The anatomic changes are those incident to a purpura hemorrhagica. The spots begin to appear about the ankles and thighs. At first they resemble very much the petechia of typhoid fever. They are intensely red and there is no elevation of the area of discoloration. The spots gradually increase in size and extend over the entire body. They merge from a deep red into that of a purplish hue, and before they disappear assume a greenish-yellow aspect. In severe cases the spots coalesce and the skin assumes a peculiar mottled condition not seen in any other disease.

SYMPTOMS.

The period of incubation is not known. If the tick has anything to do with the disease it may manifest itself very soon after the infection, inasmuch as many of the cases have ticks with their heads imbedded in the skin when they come under observation. The patient at first complains of a general lassitude and shows an elevation of temperature, about 100 to 101. As the spots begin to appear, usually in a day or two after the first symptoms of malaise, the temperature begins to rise, the spots increase in size, and in four or five days extend over the entire body. There is headache, backache, legache, loss of appetite, constipation and coryza. There are no nervous symptoms except those attending ordinary febrile diseases. After the patient has been sick for several weeks and when the temperature runs to 104 or 105 there may be delirium. The pulse is full and increases in rapidity with the elevation of temperature. The tongue is furred and sordes is present.

PROGNOSIS.

The severity of the disease seems to be commensurate with the skin manifestations. In severe cases the integument of the scrotum and thighs becomes very much discolored. Areas of gangrene appear on the scrotum or in its vicinity, and in such cases death usually follows.

DIAGNOSIS.

The disease is characteristic and after several cases have been seen could hardly be mistaken for anything else. Typhus fever, also called spotted fever, has a history of emaciation and occurs in prisons, poorhouses, etc., or among the poorly clad, illy fed of the tenement districts of large cities. Epidemic spinal meningitis has a known bacteriology, the *Diplococcus intracellularis* being recognized as its cause and is spoken of as spotted fever because of the malignant purpuric type that sometimes prevails. The cerebral symptoms present in this disease do not exist in the spotted fever which this paper means to describe.

Purpura hemorrhagica is a symptom of rheumatism and scurvy, neither of which could be mistaken for this disease.

The disease is most common among males, probably because in their occupations they are exposed to the infection. Females would doubtless be as susceptible to it were they infected.

TREATMENT.

The general management of this disease should be in accordance with symptoms presented. The constipation should be combated, elimination by the skin, kidneys and bowels should be promoted. Hydrotherapy should be employed in the same way as in typhoid fever, nutrition should be kept up. The alimentary canal does not seem to be crippled in this disease as in typhoid or the spotted fever of the cerebrospinal meningitis type. Therefore, the patient's nutrition is easily kept up.

NOTES.

Doctors McCalla and Maxey, of Boise, have seen many cases of this disease. They made blood smears which Dr. Maxey took to Professor Welsh for examination. This was done because of the report that the disease was due to a microbe that was found in the blood. Dr. Welsh gave it as his opinion, so Dr. McCalla tells me, that he could see no changes in the blood save the evidence of disintegrating red corpuscles which is found in other febrile diseases. In studying the disease, ticks have been taken from patients of this class, placed on healthy patients, allowed to "take hold" and remain for several days, being protected and permitted to do so by the individual. In such cases spotted fever has not resulted.

Spotted fever begins in April and continues through the summer. It is during the early days of April that the tick begins to manifest himself. I am told that the tick that does the harm lives in the abode of the gopher and other little animals that burrow in the earth's surface.

* Read before the Salt Lake County Medical Society, May 28, 1906.

The Function of the Hypophysis.—G. Garbini (*Rivista di patologia nervosa e mentale*), from a study of the condition of the pituitary body in idiots, imbeciles and paresis, forms in which we meet with marked alterations of bodily nutrition and in the nerve elements, finds that the gland functionates normally in these conditions. We may, therefore, conclude that its secretion, which is prevailingly of the granular type, does not influence trophism. His findings, therefore, support the conclusions of Guerrini, who held that the pituitary secretion had not a trophic but a general antitoxic function.

Clinical Notes, New Instruments, Etc.

INSTILLATION OF PURE CARBOLIC ACID INTO THE EYE.

J. C. CARTER, M.D.
DENISON, TEXAS.

Patient.—Miss L. W. called at my office April 11, in the forenoon, stating to me that she had got something in her right eye the evening before and that it was causing her much pain.

Examination.—I found a very small cinder located on the superior quadrant of the cornea on the temporal side.

Treatment.—After using a few drops of a 2 per cent. solution of cocain I removed the cinder very gently with a dull spud, and then flushed the eye with warm boric solution.

Further History.—About 6 p. m. of the same day I met her on the street and she told me that her eye was paining her considerably, and on inspection I found it very red and inflamed. I prescribed:

R.	Cocainæ mur.	gr. v	3
	Acidi borici	gr. x	6
	Aquæ dest.	ʒss	15

M. Sig.: Instil four or five drops into the eye every three hours. She used the medicine that evening and next morning. At about 2 p. m. the next day she went into the bath room to instill the medicine into the eye and by mistake filled the dropper about half full from a small bottle containing pure carbolic acid and put at least four or five drops into the eye. In an instant she screamed so that her mother and aunt ran to her as quickly as possible and discovered her mistake.

I reached her in less than five minutes. I found the lids so edematous that I could hardly open the eye, but on doing so found the lower half of the cornea perfectly white, and the eyeball burned considerably. I used alcohol, followed by a 2 per cent. solution of cocain, and then applied atropin solution, three grains to the ounce, to avoid iritis. I kept both eyes bandaged, but removed the dressing twice daily and flushed the eye with hot boric acid solution and then used a few drops of 1 to 1000 solution of alphozone. The inferior portion of ball and lower lid were burned so badly that I had to use the film of an egg between the ball and lid to avoid adhesions, using also a very small amount of an antiseptic ointment, after the third day, at each dressing. A narcotic was necessary to relieve the pain. After the fifth day I allowed the left eye to remain open, but kept the right bandaged until the eleventh day, when I removed the dressing entirely and left the eye open. She has now, 20/20 vision in the eye, and no adhesion between lid and ball, and the eye looks as perfect as it ever did.

REPORT OF A BRAIN WEIGHING 2,069 GRAMS (73 OUNCES).

CHARLES NELSON SPRATT, B.S., M.D.
MINNEAPOLIS.

Patient.—Mr. C. B., aged 42, died of meningitis, secondary to a chronic purulent otitis media. He was six feet two inches tall, weighed about 180 pounds, and was a lawyer by profession.

Autopsy.—The autopsy, performed five hours after death, by Dr. Corbett, showed a thick fibrinous exudate at the base of the brain which extended upward over the convex surface to and along the longitudinal fissure, the infection having entered the cranial cavity along the facial nerve.

The cord was cut at the foramen magnum. Without the dura the brain weighed 73 ounces (2,069 gms.). It was hardened in a 4 per cent. solution of formalin, and at the end of ten months weighed exactly 2,000 gms. (70.5 ounces). The cerebrum measured 19 cm. in its anteroposterior diameter, 12 cm. vertically, and 14.5 cm. in the horizontal diameter.

The average weight of the human brain, according to Quain, is 1,400 grams in the male and 1,274 grams in the female. In examining 559 male brains, Bischoff found 59 that weighed more than 1,501 grams and 18 that weighed more than 1,601 grams, and one that weighed 1,925 grams.

According to Wilder the heaviest non-hydrocephalic brain was reported by Thompson. This was the brain of a negro and weighed 1,983.8 grams (70 ounces). The brain of Cuvier is reported to have weighed 1,861 grams. Donaldson states that Cromwell's brain is said to have weighed 2,231 grams, and Lord Byron's 2,238 grams, but adds that there is a complete absence of collateral proof by which these records might be corroborated and much evidence positively opposed to the correctness of the recorded weights. The same writer states that the brain of Turgenieff weighed 2,012 grams. As a point in comparative anatomy it might be noted that the brains of whales weigh from 2,265 to 3,171 grams (5 to 7 pounds) and of elephants, 4,530 grams (10 pounds).

INSTRUMENT FOR INVAGINATING TIP OF APPENDIX.

S. D. VAN METER.
DENVER, COLO.

While it is impossible in all cases to adhere to an ideal technic in appendicectomy, it is generally admitted that where it is practicable invagination of the stump is desirable. In many instances, however, especially when the purse-string suture is placed too far from the junction of the cecum and appendix, the stump is not invaginated, but simply covered up with the peritoneum in the grasp of a suture applied in such a manner.

As performed, the invagination is usually accomplished with an ordinary pair of tissue or hemostatic forceps, which serve satisfactorily so far as invagination is concerned, but on drawing the purse-string suture taut, release of the forceps often becomes awkward, and sometimes difficult. Frequently the invagination is undone when the forceps are being withdrawn, owing to the increased pressure exerted on the appendiceal tissue within their grasp by the tension of the purse-string suture on the forcep blades.

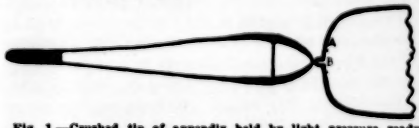

Fig. 1.—Crushed tip of appendix held by light pressure ready for invagination. A and B, purse-string sutures.

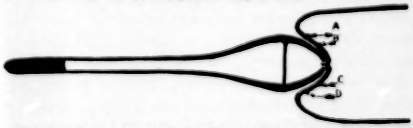

Fig. 2.—Stump invaginated. Purse-string suture ready to tie. Forceps released from grasp by firm pressure on blades. A and D, purse-string sutures; B and C, junction of appendix and cecum.

To avoid this I have devised a simple, but most satisfactory, instrument, the nature and application of which will be readily seen in the accompanying illustrations.

In the technic used I would lay special stress on two points in the application of the purse-string suture:

First.—It should be completely buried, i. e., placed entirely subperitoneal, care being taken to catch up the muscular coat of the cecum at several places, but especially at the mesoappendix and white line points.

Second.—To go only such distance from the junction of the appendix and cecum as will give sufficient room for invagination. This distance is seldom more than one-fourth of an inch.

With this technic, primary ligature of the stump is not only unnecessary, but undesirable. The lumen is closed by a crushing clamp, which satisfactorily controls leakage during the invagination process, and leaves no bulky strangulated stump buried in the wall of the cecum.

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SATURDAY, JULY 7, 1906.

ADVANCE REPRINTS OF SECTION PAPERS.

The new departure made by the Section on Ophthalmology at the Boston session of the American Medical Association is worthy of consideration. The Section required that all papers accepted for the session should be in the hands of the officers of the Section by April 10. The papers were then put in type and 600 reprints made of each. These reprints were bound in a paper-covered book and, about a week before the session, a copy of the book was sent to each member of the Section. This allowed those who took part in the work of the Section to read carefully the papers in which they were especially interested, and thus to prepare for intelligent discussion. At the Section meetings the author was given five minutes in which to call attention to the most important points in his paper and five minutes in which to close the discussion on it. This arrangement left the remainder of the time of the Section free for discussions, for which the participants were especially prepared.

The general judgment of the Section on the value of this plan may be inferred from the fact that the officers for the coming year were instructed to arrange, if possible, to have the papers presented in a similar manner at the Atlantic City session. By requiring the papers to be sent in at a slightly earlier date, it is believed that the preliminary copies can be placed in the hands of the members of the Section two weeks before the time of the sessions, and in this way still more careful consideration of them, before they come up for discussion, may be secured.

The discussions on papers thus presented showed certain striking features of considerable interest and importance. Many of those who took part in the discussions had previously written out what they wished to say, read their remarks, and then handed their manuscript to the stenographer. It was noticeable that remarks thus prepared were accurately worded, brief and directly to the point. Others who had not written out what they had to say spoke from extended notes in which they gave exact statistics, or definite references, or accurate quotations. Even where the discussion was not read or based on notes, it had a character noticeably different from the discussions generally heard in medical societies. Instead of merely complimenting the reader of the paper recapitulating the points in which the speaker agreed with him, and then rambling off in the direction that the paper had been expected to take, the discussion usually took up some point or points in the paper on which the speaker disagreed with the author, set forth the grounds on which disagreement was based, and brought arguments in opposition to those advanced in the paper. It seemed that those joining in the discussions felt more sure of the real meaning of the paper and more confident of the correctness of their own views on the controverted points than is possible where those who discuss a paper have only their first general impression on which to base their remarks.

It must not be supposed, however, that the whole of the discussion before this Section showed such evidence of previous preparation as to be open to criticism of being a "cut and dried" discussion. Each separate discussion was to a considerable extent spontaneous, although better confined to the subject of the paper than is common in spontaneous discussions. The remarks of previous speakers were new to those who spoke later in the discussion, so that spontaneity was by no means excluded. On the whole, the change of plan seemed to be a distinct improvement. More time was obtained for discussion. The discussions were of a higher order and of greater value, and the papers, prepared to be thus critically read and intelligently discussed, were at least as good as would be obtained under the old plan.

Like any other good thing, the carrying out of such a plan costs something. Without the extensive plant now owned by the Association, the preliminary printing of the papers to be presented at even one Section would be quite impossible. This plan also requires energetic, efficient and prompt action on the part of the Section officers, as well as the co-operation of those who prepare papers. Its success in the present instance depended largely on the efficient secretary, serving the Section for the third time in that capacity. The Section on Ophthalmology was favorably situated for such an attempt by reason of the fact that for the last three years twice as many papers have been offered for its sessions as could be presented before them, and on this account the Section officers could enforce their requirements as to the time that papers should be presented. Again, the expense of such an undertaking is considerable. For fifteen years this Section has had its transactions published in a separate volume, and a large number of the members of the Section are accustomed to paying money into a Section fund, in addition to their dues to the general Association. As it was, the author of each paper was required to pay a share of the cost of the 600 copies sent to members of the Section. It was a cheap way for him to get reprints into the hands of those who would be most interested in them. But in Sections like those on Practice of Medicine, or on Surgery and Anatomy, whose membership would run into the thousands, such a distribution of reprints might be very expensive.

The experiment seems to indicate that the change would give more valuable discussions. But to make such a change general with all the Sections would raise practical difficulties which might be hard to overcome. The subject is one worthy of consideration.

PRESERVED ANIMAL FOODS AND SCURVY.

In 1904 a Swedish physician, Erik Ekelöf,[1] published the results of certain personal observations as well as literary investigations concerning the occurrence of scurvy among arctic explorers. He reaches the conclusion that scurvy in general is caused by poisonous substances developing as the outcome of certain autolytic and spontaneous, non-bacterial processes in preserved animal products (meat and fish) which in most cases have constituted a large part of the food of arctic and antarctic expeditions.

We can not attempt to follow Ekelöf's reasoning in detail. Suffice it to say that he reaches his final conclusion by a process of exclusion. From a careful study of the health and the dietary of practically all authentically recorded polar expeditions he finds that the one common factor in all the cases in which scurvy made its appearance was the use of preserved meat and fish for a long period and to the more or less complete exclusion of normal, fresh animal food.

This indication that scurvy in some way depends on preserved food is materially strengthened by the further fact, which, according to Ekelöf, also is true of polar explorations in general, namely, that the disease receded as the diet of preserved animal food was replaced by one of fresh animal food.

Ekelöf is inclined to place beriberi in a group with scurvy and to regard it as having the same general etiology, i. e., to be caused by poisons developing in preserved animal food, in this case fish, modified in their actions, however, as the result of the use at the same time of large quantities of starchy food (rice).

It must be said that Ekelöf appears to make out a rather strong case against preserved animal foods, but much remains to be done before his interesting theory may be considered either as definitely proven or refuted. Thus we lack as yet definite knowledge of the chemical changes that with time may occur in animal food preserved in various ways (salting, smoking, drying, cold storage, sterilization by steam and hermetically sealing, and possibly also by means of chemical preservatives). Schmidt-Nielsen[2] was the first to show that salted fish may be the seat of progressive chemical changes of a self-digestive nature which in time give rise to considerable quantities of xanthin bases, amido acids, etc., even when the fish is kept on ice, the optimum temperature, of course, being from 35 to 45 C. It is generally accepted that autolytic ferments are destroyed when heated to 70 or 80 C., and consequently there is reason to believe that there would be no active ferments in meat and other substances sterilized by heat. These ferments act essentially as catalysers, that is, they hasten chemically processes already going on, and Ekelöf points out that the possibility of spontaneous changes leading in time to the same final result as those aided by fermentative action can not be excluded without further study. The same possibility also holds true of products in which ferments have become inactivated or held in check by preservation in other ways, e. g., by salting, smoking, drying or cold storage.

This would seem to be an inviting field for the food chemist, whose services are destined to grow more and more important now that so many people are becoming, in larger and larger degree, dependent on preserved foods, animal as well as vegetable.

1. Hygiea, 1904, vol. lv, pp. 577 and 1215. Abstracts in THE JOURNAL, vol. xliv, pp. 511 and 916.
2. Biol. Centralbl., 1902, vol. xxii, No. 13.

MENTAL HEALTH OF SCHOOL CHILDREN.

As the end of the school year approached, the newspapers brought the usual crop of sad stories with regard to children on whose developing mental faculties the pressure of school labor had worked serious havoc. At the end of May there began to be occasional reports of children disappearing from their homes, running away from school and otherwise making themselves subjects for newspaper comment more than at other seasons of the year. During June the stories of children, especially girls, who were noted as acting queerly as the result of overwork at school, became more frequent. Toward the end of the month there were a few reported suicides. In most of the cases a direct connection between worry over school work, competition for prizes and preparation for examinations could be traced. Of course, we realize that there is likely to be considerable sensational exaggeration in such stories. They make toothsome morsels for the sensational newspaper, but there is no doubt that there is a large germ of truth in most of the stories and that, unfortunately, there is every year during June an increased number of reported developments of mental disturbance in children because of the burden of school work placed on them at this time.

Almost needless to say the children who develop such mental peculiarities and degenerate traits are not the robust either of mind or of body. Especially is it true that in most cases a distinct neurotic family history can be traced. This of itself, however, should have proved a warning of the necessity for guarding such children against the stress and strain of competitive school work. Unfortunately, little attention is likely to be paid to this. Family physicians, however, usually are aware of the dangers in this matter and should warn parents of the possibility of morbid results. At this season of the year the medical inspectors of the schools should take special precautions in order to see that any pupil developing even slight mental peculiarities should at once be reported to them. There is serious danger of neglect and delay in this matter. Even with the exercise of all due care it seems not unlikely that in the modern overstrenuosity of education developing brains will still suffer occasional lamentable harm. If even a few children, however, each year can be saved from the more serious manifestations of mental disturbance, enough will have been accomplished to reward amply every effort that has been taken.

It is now while the subject is fresh that the resolutions with regard to prophylactic measures for another year should be taken. There seems no doubt that it will eventually be necessary to instruct the teachers as to the initial symptoms that are displayed in the commoner mental disturbances of children in order that the strain of study may be then at once interrupted. This is a work that in its far-reaching benevolence will appeal to all who are interested in making child life more happy and less amenable to the stresses of modern civilization. No effort can seem too great, no warning exaggerated that concerns school children under such circumstances, since it is evident their future careers and life usefulness are at stake.

THE DEATH RATE IN THE CITY AND COUNTRY.

This is the season of the year when most of the dwellers in large cities consider it advisable for reasons of health to spend at least some time in the country. Of course, the main reason for the flitting is vacation and rest rather than the desire for the country, but there is no doubt that most people consider that living in the country is much more healthful than city dwelling. There is a very curious commentary on this general impression in the special report on the statistics of mortality for the five years, 1900 to 1904, which has recently been issued by the census bureau of the United States Department of Commerce and Labor. The average yearly death rate during this period in cities of 8,000 or more population was 17.8 per thousand, while in the country it was 14.3 per thousand. This would seem a distinctly marked difference, but there are considerations that reduce the contrast very notably. It is well known that some of the higher mortality in cities is due to the fact that residents of rural districts when critically ill resort to the hospitals, dispensaries, clinics and other medical institutions in the large cities for treatment, and that the deaths occurring in such cases get into the city statistics, adding to no small extent to the reported mortality of the cities.

In certain states of the Union, even with this disturbing factor, the comparative mortality of city and country differ very little. In Rhode Island the death rate in the country was actually as high as that in the city. This would seem to be due to the fact that Rhode Island cities, better than any other in the Union, recognize their duties as hosts to a large visiting population and keep themselves in the best possible sanitary condition. The fact that so many wealthy people continue to go into the state for certain portions of the year would seem to indicate that such municipal care has a very material reward in addition to the added good health and length of life of the permanent inhabitants. In three other New England states, where municipal consciousness of the duties of the authorities toward citizens has been aroused, namely, in Massachusetts, Connecticut and New Hampshire, the urban death rate exceeded the rural by less than one per thousand. When the hospital-dispensary factor mentioned above is taken into account it would seem to be sufficient to make the real city death rate not higher than that of the country in these states.

The urban death rates are mainly high because of the frequent occurrence of respiratory diseases in crowded centers of population. Great improvements, however, have been made in this matter in recent years. The mortality from tuberculosis, for instance, has been very strikingly reduced. In 1890 the tuberculosis death rate was about 245 per 100,000 of the population. The average annual mortality from tuberculosis of the lungs during the five years, 1900 to 1904, inclusive, was only about 172 per 100,000. It is very clear, then, that the crusade against this disease is having excellent results. All reductions in this death rate make much more difference in the mortality statistics of the city than of the country. Unfortunately, pneumonia, the second among the principal causes of death, apparently is increasing about as rapidly as tuberculosis is decreasing. The average annual death rate per 100,000 of population from this disease is now about 135. The mortality from pneumonia in the cities is about 50 per cent. higher than in the rural districts, and as a rule is proportionately higher the larger and more concentrated the population.

Pneumonia is not a summer disease, and so the consideration of its high death rate in cities still further reduces the difference between urban and city mortality in favor of city life during the warm weather. The disease occurs especially where large masses of population are brought in intimate contact with one another, as in the crowded quarters of the poor and the crowded street cars, railway stations and places of public entertainment. It is the absence of these factors in the country that keeps the pneumonia fatality on a lower plane.

As a contrast to the higher mortality from respiratory diseases is the fact that among adults enteric and dysenteric diseases are likely to be more common in the country than in the city. This is due mainly to defective water supplies, though the consumption of unripe fruit and of food materials which, owing to scarcity of ice, have not been properly preserved, are also prominent factors. It must not be forgotten that mortality statistics all over the world show that typhoid fever is a rural rather than an urban disease and that with the awakening of municipal consciences and the consequent provision of wholesome water this fact is becoming still more marked.

These considerations serve to show that the comparative healthfulness of city and country is not something essential to the location, but depends on the sanitary precautions that are exercised in a given place. The country is not more, but less, healthful if sanitary regulations are not enforced, and especially if the water supply is not carefully protected. Many a city dweller goes

out into the country, confiding in its traditional healthfulness, only to find himself before long the victim of some disease that the city department of health has been guarding him against while he stayed in town. Isolated farmhouses may seem to be ideally situated as regards health, since there can be no possible crowding of population, yet they may present serious dangers because of the lack of sanitary accommodations and failure to prevent the contamination of the water supply. These ideas must be remembered in the choice of summer residences for patients and in the matter of giving advice, especially as to where convalescents should go. The fact that the dwellers on the farm themselves are in good health is sometimes no proof of the existence of proper regulations, since apparently at times they have acquired a certain immunity to the disease conditions around them, though these will readily affect persons of less robust vitality or less vigorous resistive powers.

THE TREATMENT OF INTERNAL HEMORRHAGE.

The one certain means of controlling hemorrhage consists in the local application of mechanical measures to the bleeding point, but this is ordinarily not possible in internal hemorrhage. A few drugs applied locally appear also to possess hemostatic properties. Fortunately, the bleeding not rarely ceases spontaneously as a result of processes taking place naturally in the blood, and sometimes the cessation is attributed to the medicinal agents that may have been employed. A number of drugs have been variously proposed for the control of inaccessible hemorrhage, but it is altogether doubtful whether most of them possess any actual efficacy in this connection. The question has recently been discussed by Dr. W. E. Dixon[1] on the basis of studies made in the pharmacologic laboratory at Cambridge University. As he points out, tannic acid and ferric chlorid, applied directly to a bleeding point, control hemorrhage through coagulation of proteid, while adrenalin, cocain and digitalis, similarly applied, act by causing vascular constriction. Administered internally, tannic acid is absorbed in but slight degree, while adrenalin is decomposed in the stomach, and neither under these conditions has any noteworthy influence on the blood vessels. Adrenalin introduced into a vein, as well as ergot, digitalis, strophanthus, barium and lead, administered internally or injected subcutaneously, causes rise of blood pressure, but especially in the splanchnic area, and least in the lungs, brain and coronary arteries. They are, therefore, useless if not injurious in the treatment of hemoptysis and cerebral hemorrhage. In order to prevent stimulation of the heart and vasoconstriction through reflex and emotional influences, morphin should be administered, while calcium chlorid should be given, subcutaneously or by the mouth, to increase the coagulability of the blood.

1. Lancet, March 24, 1906, p. 826.

THE RELATION OF SMOKE TO SICKNESS.

In connection with certain statements recently made in these columns concerning the relation of wind to sickness[1] it may be well to call attention to the rôle that smoke plays in producing sickness, especially, of course, of the respiratory tract. As is largely the case with dust in general, the particles of carbon and other matter contained in the smoke with which the atmosphere of our large cities is polluted so extensively, do not produce disease directly, but rather prepare the lungs for tuberculous and other infections. That the inhalation of smoke (and dust in general) is unhealthy can not well be questioned. Statistics show an increase in the mortality from acute pulmonary diseases in manufacturing districts where much smoke is generated and also in mining districts. Tuberculosis is said to run a more rapid course in smoky than in smoke-free districts. While the factors that must be considered in order to explain the increased morbidity in these localities are numerous and complex, we can not neglect the evil influence of smoke and of carbon particles in the dust. In the first place, examination of the anthracotic lung of the miner and of the dweller of smoky cities shows changes often so marked as by themselves to cause symptoms of chronic respiratory disease. The blocking of the lymphatics and of the lymph nodes by masses of coal dust can not but interfere with the physiologic functions of these structures. In the second place, Ascher found that of animals experimentally infected with tuberculosis those that were made to inhale smoke died more rapidly than the controls. Further, he found that animals that inhaled small quantities of smoke for some time beforehand acquired pulmonary inflammation on inhaling aspergillus spores, whereas the control animals did not. The results of clinical and experimental observations consequently speak in favor of the harmfulness of smoke. In view of the prevalence and fatality of lobar pneumonia in our large cities it would be appropriate to seek to place some of the responsibility therefor on their smoke- and dust-laden atmosphere. Fighting "the smoke nuisance" should be made part of the general plan of the campaign now in progress against tuberculosis and pneumonia.

THE PURE FOOD LAW.

After many years of ups and downs—principally downs—in the Congress of the United States, the Pure Food Bill has become a law. Until the last year or two public sentiment had not been sufficiently aroused to influence our national legislators to give the matter more than scant attention, but during the past year that sentiment had become so strong that even the most indifferent were compelled to recognize it. The measure passed because the public demanded it, and because this demand was so strong, so insistent and came from so many quarters—from all over the country, in fact—that it could be no longer resisted. And yet when one realizes the tremendous opposition from those directly interested financially one can hardly believe that that opposition has been overcome. It seems too good to be true.

1. THE JOURNAL, June 23, 1906.

Physicians are possibly a little more interested in that part of the law which relates to proprietary medicines, and, while it may not be as strong as some might desire, it is certainly more so than any one of us dared hope for. The law provides that medicines shall be considered misbranded "if the package fail to bear a statement on the label of the quantity or proportion of any alcohol, morphin, opium, cocain, heroin, alpha eucain or beta eucain, chloroform, cannabis indica, chloral hydrate, or acetanilid, or any derivative or preparation of any such substances contained therein." Certainly the powerful Proprietary Association of America has not been proved to be so powerful after all. But the drug phase of the law is by no means the most important. The manufacturers of fraudulent and not seldom dangerous food preparations of various kinds will hereafter find it difficult to humbug the public, and the honest manufacturers will be protected against the swindler. The thanks of the American people are due to all who have aided in passing this beneficial measure.

ROCKY MOUNTAIN SPOTTED FEVER.

Dr. Ricketts' report in this issue of THE JOURNAL of his recent work on the pernicious disease in the Bitter Root Valley of Montana, known as "Rocky Mountain Fever," shows that a definite step in advance has been made by the demonstration that the disease is communicable to guinea-pigs and monkeys on inoculation of the blood of patients. The cause of this disease, whatever that may be, consequently occurs in the blood. The failure to confirm the observation reported by Wilson and Chowning of the occurrence of a piroplasma in the blood either of patients or of animals with the inoculated disease is also noteworthy. Now, that the disease has been shown to be transmissible to animals, it is a matter for hope that a way may be found to perpetuate the inoculated disease in order to obtain better opportunity to search for the causative agent than is afforded at present under natural conditions. As emphasized by Dr. Ricketts, there is every reason to regard the disease as infectious, and continued search for the infectious agent is fully warranted. The demonstration of the inoculability of the Rocky Mountain fever is also of further significance in that a possible method is now available for test by experiment of the hypotheses offered as to the mode of natural infection. At present probably the most prominent hypothesis in regard to the mode of infection is that advanced by Wilson and Chowning, who hold that the disease is communicated by the bite of certain ticks. It would seem possible to subject this interesting hypothesis to experimental test. At all events this phase of the problem of the causation of Rocky Mountain fever should not be dropped out of sight, inasmuch as the most thorough prevention in the end must depend on accurate knowledge of the mode of transmission, and it may well be that this may be discovered before the actual cause of the disease is brought to light. Yellow fever is a most significant illustration of this possibility. On reading Ricketts' report one can not but be impressed with the vigor and keenness with which he has attacked the problem before him, and the success so far attained merits hearty commendation. The control of this fever means so much to the Bitter Root Valley, and it is only by the continued support of scientific investigation that the hope of gaining adequate control can be realized.

Medical News

ALABAMA.

Physicians Arrested.—Warrants were issued June 12 against twelve physicians of Birmingham, who were charged with failure to make obstetrical reports for the month of May.

Quarantine Lifted.—The city physician of Florence has declared that that city is no longer infected with smallpox, and has lifted the quarantine. During the three months of the prevalence of the disease there were 75 cases, with 6 deaths.

Personal.—Drs. S. J. Vann, Battelle, and Eugene R. Smith, Henegar, are about to establish a private sanitarium in Anniston.——Dr. Leslie M. Hand, Demopolis, is making a satisfactory recovery after an operation for appendicitis.——Dr. William M. Price, Florence, was stricken with cerebral hemorrhage June 21.

Quarantine.—At a meeting of the executive committee of the quarantine board of Mobile Bay the following resolution was adopted:

Steamers plying between Havana and Mobile carrying fruit may be permitted entry after disinfection at the lower bay quarantine station, provided all members of the crew, with the exception of the master and two engineers be held at quarantine station. Holds of vessels to be disinfected after discharge of cargo at Mobile. This privilege to expire with the current pineapple season.

ARKANSAS.

Registered Physicians.—Drs. E. T. Cook, Samuel C. Van Leer and Oscar S. Burroughs, Hot Springs, have been added to the registered list.

Personal.—Dr. Arthur C. Jordan, Pine Bluff, recently suffered an attack from heat prostration while performing an operation.——Dr. G. Marion Duckworth, Pine Bluff, has returned after six months spent in Europe.——Dr. Zaphney Orto has been appointed president of the Pine Bluff Board of Health.——Drs. John B. Bolton, Eureka Springs; E. Meek, Argenta; Clifford H. Trotter, Helena; John A. Lightfoot, Texarkana; and Thomas E. Holland, Hot Springs, have been appointed a committee by the State Medical Society to take part in the organization of a southwestern medical association, to include the states of Arkansas, Missouri, Texas, Kansas and Oklahoma.

COLORADO.

May Vital Statistics.—During May, 770 deaths and 34 stillbirths were reported in Colorado, equivalent to an annual death rate of 13.64 per 1,000. During the month 40 cases of diphtheria, 118 of scarlet fever, 20 of smallpox, and 39 of typhoid fever were reported. This shows a decrease of 7 cases of diphtheria and 20 cases of typhoid fever, and an increase of 17 cases of scarlet fever and 10 cases of smallpox.

Personal.—Dr. Charles E. Elliott, Victor, has succeeded Dr. C. H. Spicer as surgeon of the Cresson mine.——Dr. Horace O. Dodge, Boulder, is dangerously ill at his home.——Dr. Peter Oliver Hanford, health commissioner of Colorado Springs, has been appointed representative of the Colorado State Board of Medical Examiners for El Paso County.——Dr. Harry P. Packard, Denver, has been appointed a medical missionary by the Presbyterian Board at Oroomiah, Persia, and will sail for his new post of duty in August.

CONNECTICUT.

Graduating Exercises.—The ninety-third annual graduating exercises of Yale University medical department, New Haven, were held June 27, when a class of 25 was graduated.

Fire in State Hospital.—The amusement hall of the Connecticut Hospital for the Insane, Middletown, was destroyed by fire June 20, with a loss of $20,000, fully covered by insurance.

May Mortality.—During May, 1,396 deaths were reported in the state, 149 of which were due to nervous diseases, 147 to consumption, 142 to heart disease, 132 to pneumonia, and 88 to violence. The death rate for the state was 17 per 1,000, and the deaths from infectious diseases were 20.4 per cent. of the total mortality.

Infectious Diseases.—During May 12 cases of smallpox were reported in Putnam; 772 cases of measles in 70 towns, 188 cases of scarlet fever in 38 towns, 12 cases of cerebrospinal meningitis in 8 towns, 101 cases of diphtheria in 27 towns, 134 cases of whooping-cough in 19 towns, 44 cases of typhoid fever in 19 towns, and 78 cases of consumption in 23 towns.

Personal.—Dr. Samuel M. Garlick, Bridgeport, was seriously injured in a runaway accident May 24.——Dr. George Bloomer, formerly director of the Bender University at Albany, and professor of pathology at Albany Medical College, and later a member of the faculty of the medical department of the University of California, has been appointed professor of theory and practice of medicine in Yale University medical department, New Haven, to succeed the late Dr. John S. Ely.

DISTRICT OF COLUMBIA.

Medical Examiners' Election.—Dr. George C. Ober has been elected president of the Board of Medical Examiners of the District of Columbia and Dr. Joseph S. Wall secretary.

Tribute to Deceased Member.—The Medical Society of the District of Columbia held a memorial meeting June 13, when the life and work of the late Dr. Louis Mackall were eulogized by his colleagues.

Alumni Election.—The Washington branch of the Maryland University Alumni Association held its twelfth annual banquet and election of officers June 2. The following officers were elected: Dr. Otho M. Muncaster, president; Drs. William L. Robins and William N. Souter, vice-presidents; Dr. W. M. Simkins, secretary and treasurer; and Dr. Wilson P. Malone, corresponding secretary.

Commencement.—The annual commencement exercises of Howard University were held June 1.——The fifty-seventh annual commencement of the Georgetown University School of Medicine was held June 12, when Rev. David H. Buell, S. J., president of the university, conferred degrees on a class of 20. Dr. Samuel S. Adams delivered the address to the graduating class, and Dr. Joseph Tabor Johnson made the announcement of hospital appointments.

Personal.—Dr. Percy G. Smith, physician in charge of the District of Columbia Board of Charities, has been named as superintendent of the new home for the aged and infirm to be opened at Blue Plains in August next.——Dr. Charles S. White has been made superintendent of the Emergency Hospital, Washington, and Drs. G. I. Jones, Dallas Sutton, and A. J. Sheep, have been added to the staff of the institution.

Mortality of the Week.—During the week ended June 23, 133 deaths were reported in Washington as compared with 100 in the corresponding week of last year. Of the decedents 75 were white and 56 colored, making a mortality of 16.7 per 1,000 for the white race, and 31.2 per 1,000 for the colored race. Among the principal death causes of the week were diarrheal diseases, 26; consumption, 8; apoplexy and convulsions each, 4; and typhoid fever, 3.

Investigation of Typhoid Fever.—In reponse to a request of the Commissioners of the District of Columbia the United States Public Health and Marine-Hospital Service, in co-operation with the health department of the District, is making an investigation of the origin and prevalence of typhoid fever in the City of Washington. This investigation is of special importance as the disease has increased during the past six months, more cases having been reported during this period than were reported during the corresponding six months last year, notwithstanding the fact that a new filtration plant has been in operation, with apparently good results.

ILLINOIS.

Physicians Freed.—The jury which for two weeks past has been hearing the evidence in the case of Drs. George T. Carson, Chatsworth, and Nicholas H. Kern, Thawville, charged with being responsible for the death of Miss Nellie Clark, by an illegal operation, returned a verdict of not guilty, July 1.

Surprise Party to Podstata.—On the evening before Dr. Vaclav H. Podstata left the Cook County Institutions, Dunning, for his new position as superintendent of the Illinois Northern Hospital for the Insane, Elgin, 100 insane patients joined in a surprise party in his honor. One of the patients in a speech said that the patients were sorry to have Dr. Podstata leave; that they had no money to buy him presents, and no flowers to give him, but wanted to let him know how badly they felt that they should not see him any more.

Personal.—Dr. James A. Egan, secretary of the State Board of Health, Springfield, has been appointed a member of the American Committee of the Fourteenth International Congress of Hygiene and Demography.——There is a report in the daily press that Dr. Frank P. Norbury, Jacksonville, has been tendered the position of superintendent of the Illinois Eastern Hospital for the Insane, Hospital, to succeed Dr. J. C. Corbus, but has declined.——Dr. John A. Vanderhoof, Byron, is taking postgraduate work at Johns Hopkins University, Baltimore.——Dr. and Mrs. George W. Fagers, Nauvoo, were injured in an automobile accident June 18.——Dr. Joseph Marshall, Normal, celebrated the seventy-fourth anniversary of his birth June 24.

Alleged Consumption Cure Denounced.—Dr. James A. Egan, secretary of the State Board of Health, brands as false the press dispatches which recently stated that Harry Maclay of Clinton, who had been in an advanced stage of consumption, had been entirely cured by the use of a prescription given to his father by an old man in Chadwick, Ill., and that Maclay's sputum had been examined by Dr. Egan, who had stated that the patient was suffering from tuberculosis in an advanced stage. In this regard Dr. Egan states that he has been informed by Maclay's physician that if Maclay was tuberculous, the disease was in its incipient stage, and that Maclay was not, in his opinion, a very sick man. Dr. Egan makes this statement in the interest of the people of Illinois,, and other states who may be misled and imposed on in this matter. The facts have been so exaggerated in part that Dr. Egan says that it is fair to assume that the whole matter is a mere scheme to get in touch with consumptives, presumably to sell them some nostrum.

Chicago.

New Hospital.—Plans have been prepared for a hospital in South Chicago, to be two stories in height, 64 by 40 feet, and to cost $10,000.

Sunstroke.—The Department of Health has issued a leaflet of suggestions for the relief of those suffering from sunstroke and from heat exhaustion.

Summer Hospital Opened.—The sumer hospital and convalescent home, conducted by the Chicago *Tribune*, opened in West Chicago, June 20, under the direction of Dr. William A. Evans, who will select an attending and consulting staff.

Ravenel in Chicago.—Dr. Mazyck P. Ravenel, assistant medical director of the Henry Phipps Institute, Philadelphia, one of the committee selected by the Illinois Manufacturers' Association and the Chicago Commericial Association to investigate conditions at the stock yards, arrived in Chicago June 20.

Deaths of the First Half Year.—During the first six months of 1906, 14,524 deaths were reported, equivalent to an annual mortality of 14.29. This is considerably lower than the average annual death rate for the first six months of each year from 1895 to 1905, inclusive, which was 15.25 per thousand of population.

Deaths of the Week.—The total deaths from all causes for the week ended June 30 was 476, 53 more than for the preceding week, and 37 more than for the corresponding week of 1905. Pneumonia leads the death causes with 50, followed by Bright's disease with 49, consumption with 46, heart disease with 30, acute intestinal diseases with 29, cancer with 21, and scarlet fever with 19.

IOWA.

New Hospital.—Work has been commenced on the new hospital in Burlington, which will cost $30,000.

Old Bill Paid.—Dr. Vernon L. Treynor, Council Bluffs, has been paid a bill of $589.10 as balance due him for attending smallpox patients in 1900 and 1901.

Smallpox.—Dr. Fred W. Powers, Waterloo, member of the State Board of Health, says that smallpox is prevalent in Belle Plaine. The disease is said by a local physician to be an innocent eruptive disease

Commencement Exercises.—The State University of Iowa College of Medicine, Iowa City, graduated a class of 50 June 9.——A class of 14 was graduated from the Sioux City Medical College June 6. The address to the class was delivered by Rev. F. H. Pittinger, Sloan.

Central District Medical Association.—The Central District Medical Society assembled for its thirty-second annual meeting in Nevada June 19. Dr. Edward M. Myers, Boone, was elected president, Dr. George W. Kester, Grand Junction, vice-president, and Dr. George H. Stanger, Boone, secretary and treasurer (re-elected).

Perpetual Injunction Issued.—The district court in the case of Dr. H. W. Smith, Rockwell City, against the state, has decided that the State Board of Health cannot revoke a phy-

sician's certificate without due notice and a hearing. Judge McVey also issued a perpetual injunction against the board restraining it from revoking Dr. Smith's certificate.

Personal.—Dr. Ole C. Willhite, superintendent of the State Home for Inebriates, Knoxville, has been appointed superintendent of the Cook County Institutions, Dunning, Ill., and will assume charge of the institutions July 15.——Dr. L. D. Wiggins, Wayland, recently fell and fractured his hip.——Dr. Joseph R. Ryan, Des Moines, has returned from a visit to the state of Washington.——Dr. John G. Mueller, Iowa City, has been appointed state medical director for the Roman Catholic Mutual Protective Society of Iowa, vice Dr. N. J. Alexis Mueller, Dyersville, deceased.——Dr. Oliver W. Boatman, Burlington, has been elected physician of Des Moines county.——Dr. R. C. Smith, Troy Mills, who has been seriously ill, is convalescent.——Dr. Grant J. Ross has been confirmed as health officer of Sioux City, by writ of mandamus.——Dr. S. M. Gunn, Boston, Mass., has been elected professor of hygiene in the State University of Iowa College of Medicine, and will also succeed Dr. Paul Shekwana, resigned, as a member of the staff of the state bacteriological laboratory.

MARYLAND.

Baltimore.

Commencement.—The Baltimore University School of Medicine graduated a class of four on June 14.

Death Report.—During the week ended June 30, only 178 deaths were reported, equivalent to an annual mortality for the white race of 13.61 per 1,000.

Treatment of Incorrigibles.—The Department of Health is trying the experiment of treating cases of incorrigibility in school children by giving attention to physical ailments, such as troubles of the eye, ear and throat, anemia, etc.

Personal.—Dr. Louis M. Allen has been commissioned assistant surgeon of the Maryland Naval Brigade, with the rank of ensign, vice Assistant Surgeon J. Frederick Adams.——Dr. Robert Hoffman sailed for Europe July 4.——The late Dr. Sidney O. Heiskell died intestate, leaving an estate of $30,000.

Sent to Prison.—"Dr." Thomas H. White, who has conducted a "College of Science" in Baltimore, in which he claimed to teach spiritualism, magnetism, mental healing, etc., was convicted of fraudulent use of the mails, and on June 23 was sentenced to three years' imprisonment in the state penitentiary.

Typhoid Fever.—It is said that about 300 cases of typhoid fever have occurred in the northern section of Baltimore, and that the disease is still on the increase. The solicitor has given an official opinion that the health commissioner has the right to condemn and close contaminated pumps during such an epidemic.

NEW YORK.

Dr. Bayley Resigns.—Dr. Bayley, who has been the superintendent of Vassar Brothers' Hospital at Poughkeepsie, has resigned after twenty years of service.

Smallpox Epidemic.—Dr. Darlington received a message from the secretary of the State Department of Health, notifying him that there were from 40 to 50 mild cases of smallpox at Catskill-on-the-Hudson, and of this number several cases were still ill. Dr. Darlington wished the public to be notified of this so that any who intended to go there might be vaccinated.

New York City.

Swedish Hospital Dedicated.—This hospital, the remodeled Malupen mansion, is the first Swedish hospital in Greater New York. It cost $65,000 to fit up the building and will accommodate 75 patients.

Non-Immunes Detained.—Of the 128 passengers from Havana who were not immune from yellow fever, 126 were sent to Hoffman's Island. They arrived on the *Esperanza* from Vera Cruz, Progreso and Havana.

Personal.—Dr. Joseph E. Lumbard has been appointed anesthetist to Harlem Hospital.——Dr. and Mrs. George L. Brodhead sailed on the *Teutonic* last week.——Dr. William T. McMannis sailed on the *La Provence* for Havre on June 28.

Milk Commission.—This commission announces that while it has supervision of only that portion of the dealer's milk which carries its certification, it does not intend to allow a dealer known to have adulterated milk to sell certified milk.

Illicit Healers Convicted.—The County Medical Society has succeeded in having three persons convicted for violating the medical laws of this state. They were Joseph Hanna, who poses as an osteopath, John Frack, who practised illegally, and Mary E. Frack, who posed as a teacher of psychology and claimed to cure by hypnotism.

New Seaside Hospital.—The Association for Improving the Condition of the Poor announces that if $35,000 is not forthcoming, and at once, the $215,000 already conditionally subscribed, will be lost. The value of such an institution to cure children with tubercular diseases has been made apparent by the success of the Sea Breeze Hospital at Coney Island.

Hospital for the Insane.—The proper authority has ordered that certain lands should now be bought at a cost of $146,000. The plat is 200 by 250 feet and overlooks the East River. It will be leased to the state and the State Commission in Lunacy will erect the necessary buildings at a cost of $300,000. This building will be built on the most modern and scientific plans.

New Hospital in Bronxville.—A real estate man of Bronxville has given to this village sufficient ground on which to erect three buildings, two of which will be for hospital purposes. The whole gift is valued at $100,000. It is intended to have two wings to be used for hospital purposes; the main building being occupied by stores, the income from which will support the hospitals.

Fewer Nurses in the Tenement Work.—Because of lack of funds the 52 nurses, the number usually employed by the health board to visit the public schools and work among the poor, will be forced to take a three months' vacation. The probabilities are that, as a result of this, the infant mortality will be higher this summer. Dr. Darlington was forced to take this measure because the board of estimate and apportionment had cut down the appropriation asked for.

Contagious Diseases.—There were reported to the Sanitary Bureau for the week ended June 23, 611 cases of measles, with 20 deaths; 396 cases of tuberculosis, with 177 deaths; 288 cases of diphtheria, with 16 deaths; 160 cases of scarlet fever, with 4 deaths; 35 cases of whooping cough, with 4 deaths; 33 cases of typhoid fever, with 2 deaths; 8 cases of cerebrospinal meningitis, with 9 deaths; 110 cases of varicella, and 4 cases of smallpox, making a total of 1,645 cases and 232 deaths.

Change in City Ordinance.—An ordinance in relation to the admission and removal of patients in hospitals in this city is as follows:

Section 1—No superintendent of a hospital in the city of New York, or other person in authority, shall refuse admission to an applicant unless such applicant has a contagious disease or infectious complaint, or unless the case required by such applicant does not come within the range of treatment specifically provided for in such hospital; nor shall any superintendent or other person in authority, order or suffer the removal of any patient while in a dangerously sick or precarious condition to another hospital, unless such patient shall, after admission, have developed a contagious or infectious complaint or requires care not specifically within the range of treatment of such hospital.

Sec. 2.—Every superintendent, or other person in authority, of a hospital in the city of New York who shall violate any of the provisions of this ordinance shall be subject to a penalty not exceeding $100 for each and every offense.

Panic in New York Public Schools.—Fearing that their children were to be murdered, and that the horrors in Russia were to be renewed here, excited Russians and Poles rushed to the schools June 27, demanding their children, demolishing doors and windows, desisting only when the teachers dismissed the children and the police in large numbers arrived. On the following day the Italian neighborhood became similarly affected and their wrath was appeased only when they found their children well. The exciting cause of these riotous attacks seems to have been occasioned by persons who went from house to house telling the parents not to permit operations on their children by physicians of the Board of Health, which, they asserted, was about to be done. It appears that the school authorities reported that there were in one school, known as the "defective school," about 150 children, most of whom were suffering from the effects of enlarged tonsils and adenoid growths. Of these 75 had been operated on at dispensaries, and on investigation it was demonstrated that the results in school percentages had increased remarkably after operation. That these and the remainder should be taken care of by the fresh air fund an effort was made to induce those not operated on to be attended to before school closed. From a house to house canvass it was ascertained that the parents were all anxious to have the operations done, but that they were too poor to spend car fare to go to the hospital for treatment. On these representations three throat specialists volunteered to go the school and operate on those whose parents gave consent in writing. On June 22, 83 children were operated by these gentlemen, assisted by sanitary in-

spectors and trained nurses. The operations were not followed by any disturbances whatever, and all of the children were at school next day.

PENNSYLVANIA.

Philadelphia.

Personal.—Dr. William E. Hughes, who was operated on for appendicitis, is improving.——Dr. John B. Chapin received the honorary degree of LL.D. from Williams College June 27.—— Dr. William W. Keen was the recipient of a similar honor from Yale University on the same day.

Decision Adverse to Vaccine Foes.—Judge Gillan at the regular session of court in Chambersburg June 19 handed down an opinion in the case of the commonwealth of Pennsylvania against the school directors of Waynesboro, and the school superintendent and teachers of a school in that place. A writ of alternative mandamus had been granted at the instance of the attorney general to the school authorities. Its purpose was to bring the school authorities into court to show cause why they should not exclude a pupil from school because she did not have a certificate of vaccination. The anti-vaccinationists moved to quash the writ, but the court refused to grant the prayer and discharged the rule. The defendants are required to file an answer to the alternative writ in 20 days.

Health Report.—The total number of deaths reported for the week was 503, 74 more than the number reported last week, and 62 more than those reported in the corresponding week of last year. Infants and the aged and debilitated succumbed in large numbers. In the latter category is included 63 deaths from tuberculosis. Of the 91 who died from summer complaint 83 were under the age of 2 years. The principal causes of death were: Typhoid fever, 11; measles, 2; pertussis, 11; consumption, 63; cancer, 21; apoplexy, 23; heart disease, 34; acute respiratory disease, 39; enteritis, 91; appendicitis, 6; Bright's disease, 24; old age, 5; suicides, 5; accidents, 22; and marasmus, 7. There were 175 cases of contagious diseases reported, with 14 deaths, as compared with 219 cases and 27 deaths reported in the previous week. Only 99 new cases of typhoid fever were reported during the week. This is the smallest number known in the last two years, and was a decrease of 27 below the number reported last week.

GENERAL NEWS.

Roentgen Ray Society.—The seventh annual meeting of the American Roentgen Ray Society will be held Aug. 29-31, 1906, at the Cataract and International hotels, Niagara Falls, N. Y. The officers announce a good program. An interesting feature will be the exhibit of prints and negatives. The railroads have granted a rate of a fare and a third on the certificate plan. Full information may be obtained by addressing the secretary, Dr. George C. Johnston, 611 Fulton building, Pittsburg, Pa.

Cholera in the Philippines.—Chief Quarantine Officer Heiser reports that cholera again made its appearance in Manila May 9, after a period of absence lasting from March 21. One case occurred on May 9, 2 on May 10, and 3 on May 11. Every possible effort was made to trace the source of infection, but so far all attempts have been unsuccessful. The first case occurred in the person of a male beggar, who was known to have been in the city for at least several weeks. So far as could be learned, he ate only such food as is common to the poorer classes. While it has not been possible to trace any connection between the cases, yet they have all occurred in the district of Tondo, and all of them in houses that border or the same estero. The situation in the provinces, Dr. Heiser states in *Public Health Reports*, continues to be favorable, only a few cases being reported. The annual fiesta at Antipolo, which is situated within 15 miles of Manila, and usually lasts more than a month, and at which often from 40,000 to 50,000 persons are present, is now taking place. Every effort is being made to dispose of the excreta of these pilgrims in a sanitary manner, but in a town in which the normal population of 3,000 is suddenly augmented to more than 40,000 or 50,000, the difficulties that are encountered in that work will be appreciated.

FOREIGN.

Physicians in the Russian Douma.—Later advices state that there are 17 physicians in the Russian douma besides several members who have studied medicine but have not been officially registered.

Rise in Prices of Surgical Instruments.—The combination of European firms dealing in surgical and medical appliances, the *Gesellschaft für Chirurgie-Mechanik*, announces an increase in the prices of surgical instruments, hospital appliances, orthopedic apparatus, etc. A general increase of 10 per cent. in the prices will go into effect August 1, according to a notice in the last *Deutsche med. Wochft.*

The Mikulicz Memorial.—A letter from Breslau in the *Med. Klinik* states that 20,000 marks (about $5,000) have already been received for the Mikulicz memorial fund. The writer adds that about a third of the amount has been received from American physicians.

International Congress for Care of the Insane.—Our foreign exchanges state that the preparations are well under way for this congress, which will open at Milan September 26. A number of eminent psychiatrists from various countries have announced their intention to be present, so that the success of the congress is assured, although it can scarcely be as epoch-making as the congress at Antwerp.

Preventive Lectures at Berlin.—The local branch of the German Society for the Repression of Venereal Diseases has organized a series of public evening lectures. The first lecture is to be held in the Langenbeckhaus in June and is addressed exclusively to university students on the theme of venereal disease. Dr. O. Rosenthal, Sanitätsrath, will deliver the lecture. The next one will be given in July, addressed to clerks and others connected with mercantile establishments.

Professor Schatz Retires.—Professor C. F. Schatz, the eminent German obstetrician and professor of gynecology at Rostock, was accused of misappropriating several thousand dollars of hospital funds. He insisted on a thorough investigation and the trouble was found to be the result of a clerical error in auditing the accounts of the hospital. He has resigned his connection with the university and will henceforth devote himself to private practice. He is now 65 years old.

Ninth Congress of the German Dermatological Society.—This congress is to be held this year at Berne, September 12 to 14. No official themes have been appointed, as there are to be so many demonstrations and discussions. Neisser will present the present status of experimental research on syphilis, and Hoffman will tell of the latest research in regard to the etiology of the disease. Professor Jadassohn of Berne will supply further particulars to those interested.

Physicians in Public Life.—It is announced from Germany that the authorities of Baden are considering the organization of a council comprising physicians, dentists, veterinarians and druggists. The organization will deal with matters affecting the profession and the public health in general. Membership in the medical chambers in Germany is compulsory on the physicians in a district where one exists. The new organization is planned along the same lines, only it will embrace the allied branches.

International Conference for Cancer Research.—As already announced, the opening of the Institute for Cancer Research at Heidelberg, September 24, will be celebrated by an international conference on cancer research. The appeal to members of the profession to participate in this international conference is signed by Czerny of Heidelberg, Ehrlich of Frankfurt a./M., and von Leyden of Berlin. Each of these will present the results of their latest researches on cancer and demonstrate cases, specimens, etc. Professor G. Meyer of Berlin is the secretary general of the conference.

Death of Manuel Garcia.—It is only a little more than a year since March 17, 1905, when the musical and medical world paid homage to Manuel Garcia on the fiftieth anniversary of his invention of the laryngoscope, which happened to be at the same time his hundredth birthday. The Garcia centenary was described at the time in THE JOURNAL, pages 970 and 1129 of volume xliv. The cable now brings word of his death, July 1. He was a noted opera tenor before he became professor of vocal music at London, where he has since resided. He came to this country as a member of the first Italian opera troupe that visited America.

Professor Chiari Goes from Prague to Strasburg.—H. Chiari has been professor of pathologic anatomy at Prague since 1882, and is now 55 years of age, having been born in Vienna in 1851. He has accepted a call to Strasburg to take the chair left vacant by the retirement of von Recklinghausen, who is now in his seventy-fourth year. Chiari has been editor of the *Zeitschrift f. Heilkunde* since 1884. Ribbert of Bonn was first invited to the chair at Strasburg, but declined. Bier of Bonn has also recently declined the chair at Heidelberg left vacant by Czerny's retirement to assume charge of the new Cancer Institute. A banquet was given recently to Bier and Ribbert by their friends in Bonn in appreciation of their decision to remain there.

Sanitary Reform in Roumania.—A letter in the *Med. Klinik* states that the parliament has voted an appropriation of 8500,000 for the immediate construction of thirty-two hospitals in the rural districts. The writer comments joyfully on this fact, remarking that the hospitals will serve not only for the care of the sick, but as centers of education of the populace in matters of hygiene, etc. The letter adds: "Steps are now being taken to found a great lottery under state guarantee, the net profits of which are to be devoted strictly to projects of sanitation. This will not only supply means for systematic suppression of epidemic and endemic diseases, but it will also keep in the country the many millions hitherto spent in foreign lotteries by those fond of this form of speculation." The laws in the United States condemn lotteries.

Osteomalacia Cured by Roentgen Exposures of Ovaries.—Ascarelli of Rome recently reported to the local medical society the case of a woman of 38 with puerperal osteomalacia cured by Roentgen treatment. The osteomalacia had grown much worse during her last pregnancy, and no benefit had been derived from any measures until Roentgen treatment was commenced. Prolonged exposure of the ovaries to the *x*-rays caused all pains to subside and the menses did not recur. He is convinced that the ovaries have become atrophied under the influence of the Roentgen rays, although there are no means of determining the exact anatomic condition. Pestalozza comments on the case in *Ginecologia*, remarking that he has encountered a case of typical osteomalacia in which the ovaries were found reduced to less than half the normal size. On the other hand, Truzzi and others have witnessed the persistence of metrorrhagia in osteomalacia after removal of both ovaries. They insist that the uterus should be removed with the ovaries to insure the full effect of the castration on the morbid process.

Resolutions on Communicable Diseases.—Among the resolutions voted by the French *Académie de Médecine* is one to the effect that statistics in regard to the causes of deaths offer no guarantee as to exactness unless they are made out by the attending physician. The declaration should not be made compulsory unless measures can be taken to insure professional secrecy. Vital statistics should be based on the causes of diseases. When the next international conference convenes, in 1910, the nomenclature of the causes of deaths should be revised, and revision should be postponed until then. The declaration of communicable diseases, compulsory for the physician, should be imposed likewise on the head of the family and the heads of establishments. In regard to the prophylaxis of tuberculosis, the present regulations in respect to disinfection of the apartments occupied by the tuberculous are inadequate, as the conditions of development of this disease differ so essentially from those of other communicable diseases. Consequently, tuberculosis requires special regulations. The special regulations should apply not only to the communicability, but also to other etiologic factors, especially the unhealthfulness of the residence and alcoholism. The addition of whooping cough to the list of diseases whose declaration is compulsory was also voted. These resolutions were the result of long study on the part of a special committee, and were adopted by the academy without a dissenting voice, June 5.

LONDON LETTER.

Army Medical Reform.

In a letter to the *Times* Sir Frederick Treves criticises the medical arrangements of the British army, which he compares unfavorably with those of the Japanese. He complains that there is no co-ordination of sanitary effort and no organization to cope with the great hygienic problems encountered in field service. There is no evidence as to who is to be held responsible for failure in sanitation. The principal medical officer has no authority in the matter and no power or organization at command to carry out what he knows to be needed. The combatant officer receives no systematic instruction in the hygiene of troops on a campaign. The private soldier is taught how to seek cover, but not how to save himself from infection. The medical energy of the British army in the field is at the wrong end of the column. It is in the rear to deal with the sick who fall out of the ranks; it should be in the van to protect the column from the onset of disease. He suggests the following reforms: 1. The head of the army medical department should be a physician. At present he is the adjutant general. 2. The director of the department should be responsible for its efficiency and administration. 3. The army surgeons should be provided with authority and power to carry out in the field the sanitary arrangements essential to secure the minimum loss of life. 4. The combatant officer should have some knowledge of hygiene as applied to campaigning and barrack life; some still more elementary knowledge should be possessed by the private soldier.

Opening of the King's Sanatorium.

The king has opened the magnificent edifice built among the Sussex pine woods by his command for the treatment of consumption. Having seen one of the German sanatoria for consumption he determined to devote a large sum, presented to him by a donor who wished to remain anonymous, to the erection of such an institution in Great Britain. Believing that provision was being made in other ways for the poorest classes, he intended this establishment for persons of superior social status but of slender means and unable to afford the cost of prolonged residence in a private sanatorium. The sanatorium is one of the largest and best equipped institutions in the world. It is situated at an altitude of 496 feet above the sea level and stands in grounds of 150 acres. The building is of three stories and there is a cluster of five lofty gables in the center. On the front are broad balconies on to which the bedrooms open. The dining hall and chapel are warmed by pipes underneath the flooring after the old Roman fashion. The most remarkable building in the institution is the chapel which was built with the idea of being open air. It is composed of two naves inclined to one another at an angle like the letter V and entirely open on their inner sides, which consist of colonnades. The chancel is at the apex of the V. The congregation will practically sit in the open air with the warmed floor beneath their feet. There is a further provision for them to sit in summer under the sky, for the space between the two naves is an open courtyard. At the opening ceremony the members of the advisory committee present included Sir William Broadbent, Sir R. Powell, Sir Felix Semon, Sir Hermann Weber and Dr. C. Theodore Williams. The king congratulated the advisory committee on the whole-hearted manner in which they had carried out the trust, and said that he hoped that the research laboratories, equipped with every resource of modern science, would advance the knowledge of pulmonary disease.

Infant Mortality in England and Wales.

The official statistics of infant mortality in England and Wales in the last half-century are of interest. The deaths under one year of age to 1,000 births averaged 154 in each of the two decennia 1851-60 and 1861-70. In the two following periods the rate declined to 149 and 142; but in the last completed decennium the rate again rose to 154, thus justifying the statement that during the first 60 years of civil registration of births and deaths there has been no permanent decrease in infant mortality, notwithstanding the great decline in the general death rate. However, during the five years 1901-05 the rate again declined to 138, and during the last year, 1905, it fell to 128—the lowest on record since the commencement of civil registration in 1837. This result appears to be due to greater care in the treatment and feeding of infants. There is a considerable difference between the mortality in the towns and that in the rural districts. Thus while in 1905 the rate for the whole country was 128, it was 140 in the 76 large towns and 132 in 141 smaller towns; in the remaining and mainly rural population it was only 113. For 1904 the registrar-general has published some valuable information on the distribution of mortality in the first year of life. Forty-nine per cent. of this mortality occurs before the age of 3 months, 20 per cent. between 3 and 6 months, and 31 per cent in the last six months. In recent years there has been a marked and steady increase in the deaths referred to premature births. In the five years 1886-70 these deaths were 11 per 1,000 births; in 1896-1900 the proportion increased to 19, and in 1904 to 21. There is no marked difference in the mortality due to the cause between urban and rural districts, and the figures do not suggest any connection with the industrial occupation of women. This is one of the subjects to be discussed at the approaching national conference on infantile mortality which has been previously announced in THE JOURNAL.

The Inspection of Food.

The sensation caused by the Chicago packing-house scandals has not yet showed any signs of subsidence and has had many consequences. Mr. Burns, president of the local government board, will probably introduce into parliament a bill dealing with the inspection of food. For some time the health committee of the London County Council has urged the necessity for the employment of special inspectors of food. This necessity has been emphasized of late by the seizure of pigs or parts of pigs found to be tuberculous. The tuberculous glands are removed from the head before it arrives on the local vendor's premises, a process equivalent to the stripping of the tubercu-

lous pleura from the carcasses of cattle. It is argued that if the London County Council appointed and controlled the inspectors of food there would then be, in conjunction with the system carried out at the port of London by the corporation, complete examination and inspection of the food supply of the metropolis. At present certain of the councils of the boroughs into which London is divided appoint specially qualified food inspectors, with the result that purveyors of diseased meat get rid of their goods in other districts where inspection is imperfect. In consequence of the Chicago disclosures the British military authorities have begun a thorough overhauling of the stocks of preserved meat on hand at the various garrisons. At the meeting of the health committee of the Liverpool corporation Dr. Hope, health officer, asserted that the great bulk of tinned meat came into Liverpool in an excellent condition, but he advised people to refrain from taking anything that came from Chicago so long as the present conditions existed. In the House of Commons, Mr. H. Lea said that he trusted that the war office, in view of the recent revelations, would decline to allow any canned goods from the United States to be supplied for the food of soldiers. The condition of the packing-houses is simply revolting. He moved the reduction of the vote for the army estimates by $500,000, which he would press if he did not receive from the government a pledge that canned goods from America would be accepted for army purposes only under the strictest government supervision. Mr. Haldane, secretary for war, regretted that the United States is not the only country which supplies bad tinned meat. The whole question would be looked into. In the meantime there is a large contract with an American firm by which the war department is bound to abide by if all is right, but the war office has promptly sent over a special officer to inspect on the other side the goods which would be supplied. At several workhouses the use of tinned meat has been discontinued and in one (Fulham) the inmates have risen against a tinned-meat diet.

Neurologic Investigations at the London Hospital.

At the London Hospital Dr. Head and Mr. Sherren have for some time been engaged with the assistance of other workers in neurologic researches which have culminated in a discovery of the first importance, which must rank with the discovery of Bell that the posterior root of a spinal nerve is sensory and the anterior motor. They have found that the body is endowed with three forms of sensibility, which they suggest are conducted by three series of fibers in the afferent nerves. After section of the median nerve, if no tendons have been divided, a touch with a pencil or with anything which deforms the skin of the affected area may be not only readily appreciated but well localized. When pricked with a pin the patient knows that he has been touched, but fails to perceive the sharpness of the stimulus. This Dr. Head and Mr. Sherren term "deep sensibility" or "deep touch." But if tendons have been divided or if the section involves the nerve above the point at which its muscular branches are given off, deep touch may be absent. After section of a nerve the point of a pin and all temperatures are unappreciated within an area which varies somewhat in each case. This they term loss of "sensibility to prick." Surrounding this area and corresponding closely to the anatomic distribution of the nerve is a territory within which the patient is unable to appreciate light touches with cotton, wool and temperatures between 22 and 40 C. ("minor degrees of temperature") and fails to discriminate the points of a pair of compasses when separated to many times the normal distance. Within this area (termed the "intermediate zone") the patient can appreciate the sharpness of a pin prick and can differentiate temperatures below 18° C. from those above 45 C. (temperatures of the more extreme degrees"). In the recovery of a nerve after suture sensibility to prick returns to the whole area before sensibility to light touch. Dr. Head and Mr. Sherren have, therefore, advanced the theory that the afferent fibers in the peripheral nerves can be divided into three systems: 1, Those which subserve deep sensibility; 2, those which respond to painful impressions and to extremes of heat and cold; 3, those responding to light touch and which enable the minor degrees of temperature to be appreciated and two points to be discriminated. They believe that the fibers of deep sensibility run to a great extent with the motor nerves to the muscles and then pass along the fibrous structures connected with them. To the second system they give the name "protopathic." It subserves the form of sensibility which exists in the intermediate zone between the boundary of loss of all forms of cutaneous sensibility and that of loss of sensibility to light touch and to the minor degrees of heat and cold. In an area endowed only with this form of sensibility the sharpness of a pin prick is recognized and water at 50 C. and ice can be discriminated from one another. All sensations are badly localized, radiate widely and are accompanied by tingling. This system regenerates more quickly than the third. To the third system of sensibility they give the name "epicritic." Light touch and the minor degrees of heat and cold are recognized by these fibers. The protopathic fibers of nerves supplying adjacent areas have a much greater overlap than the epicritic; the amount of overlap of the latter is negligible.

VIENNA LETTER.

Institution of a Nothnagel Lecture.

VIENNA, June 6, 1906.

In honor of Dr. Nothnagel, the late professor of clinical medicine, a novel institution of the kind well known in England and America, has been planned by his numerous friends, pupils and grateful patients. Funds are being collected for the purpose of establishing a series of Nothnagel lectures to be delivered in his former clinic on the anniversary of his death. The subject of the lecture has been chosen from the pathology of the intestinal canal or the brain, which was the favorite research ground of the deceased physician. The successor of Professor Nothnagel is Professor v. Noorden, from Frankfort, and it is very likely that he will be asked to deliver the first lecture of the series. All lectures at the Vienna University are paid for by the state, and hitherto there has been no honorary lecture "in memoriam." The new plan has been accepted unanimously, and it is likely that it will be followed in future.

An Extraordinary Distinction for a Surgeon.

The director of the first surgical clinic, Professor v. Eiselsberg, has been appointed by the emperor, surgeon general of the fleet. This post had not been occupied for more than 20 years, and is rather an honorary one, the eminent surgeon receiving it in recognition for the services rendered to the naval staff as counsellor on medical organization and hospital boats. The navy plays rather an inferior rôle in the Austrian state, on account of the short extent of the coast line, and it has hitherto been rather neglected, but the recent development of political affairs has turned the tide in favor of the navy. Hospital ships, naval hospitals at the base of the fleet, arrangements for the care of the sick and wounded, have been, with advice from Professor Eiselsberg, added to the equipment, forming a really modern, up-to-date outfit for the needs of the uncertain future. Professor v. Eiselsberg has devoted a large amount of thought to establishing a thorough and effective system, which is partly based on the English, partly on Japanese institutions.

Weekly Surgical Demonstrations.

The directors of the hospital wards have joined in an effort to make modern surgery, its diagnostics and therapeutics, accessible to all practitioners, free of charge, by instituting weekly surgical demonstrations. It is intended to enable every doctor to show any cases of interest, to deliver a few remarks as to its special features and the treatment adopted or planned, limiting discussion to five minutes. Especially those cases which are of special interest to the general practitioner on account of their frequency, their bad results or certain other points of view come into the scope of the demonstration before the various clubs and societies. All eminent surgeons have promised co-operation. The operating theater of the first surgical clinic has been chosen, because it accommodates easily 500 persons. No invitations are sent out, as every medical man may come and listen or take part in the demonstration. Among the topics presented recently were Bier's method of artificially induced hyperemia, the sterilization of silk and catgut, radical cure of purulent ear discharge and similar practical subjects.

The Epidemic of Cerebrospinal Meningitis.

The epidemic of cerebrospinal meningitis which originated in the eastern part of Europe has not been definitely stamped out. At first the eastern border of Austria suffered severely; not only children but adults as well fell victims to the disease. Stringent measures were adopted to check its spread, and the desired effect was obtained in proportion to the intelligence and standard of cleanliness of the population of the endangered district. In Vienna a sort of quarantine was organized for passengers arriving from infected parts of the empire, and isolation barracks were kept ready for emergencies. Apart from the strictly medical provisions, such as thorough disinfection of the personal property in infective cases and hospital precautions, the public is being kept instructed by leaflets as to the chief symptoms and the need of isolation in suspected cases. With the aid of these means only sporadic cases were observed in Vienna, as is usual in all large cities, 10 or 12 a year, mostly among infants. Recently a fresh outbreak oc-

curred near the outskirts of Vienna in the military barracks, and two cases proved fatal. These cases were all imported from the eastern borderland of Austria, from Galicia, whence the regiment affected draws its recruits. The barracks were disinfected and all other precautions adopted, thus checking the epidemic in its very beginning. So far, 72 days after the first outbreak, no fresh case has been reported. The bacteriologic examination showed the presence of the diplococci of Fränkel and of Weichselbaum.

Fighting the Dust Nuisance.

The prevalence of dust in the Vienna streets has for some time been the object of intense study by municipal men, without any apparent result. Finally a "Society for the Abolition of Dust" has been formed, whose work has already produced some remarkable effects. The experiments conducted by the society have resulted in the approval of a specially macadamized street pavement, which is rendered more dust free by the addition of oil or petroleum. Two streets have been laid out according to the directions of the society, their length being 400 and 320 m. respectively. Furthermore, the collection of household refuse and waste matter has been reorganized. The dust, coal ashes, etc., are being collected in hermetically closed dust bins, without shedding their contents into the street, as was customary until recently, and numerous shops, on the admonition of the "society," have adopted measures for reducing the dust within their premises. Considering the extent of tuberculous diseases in Vienna, which actually brought the name of *morbus Viennensis* to this disease, the fight against dust deserves the utmost attention. In concord with the above mentioned measures, the spitting nuisance has received the same attention. In every car, tram, bus and train short notices are placarded, forbidding spitting: "Passengers are requsted not to spit. Fine 200 k. (40 cents)." The progressive sanitation, the improved supply of water, the lower percentage of slums and the suppression of unhealthy food have resulted in a slow but constant lowering of the death rate in the last five years from 20.5 to 18.5 per 1,000.

Reform of the Out-Patients' Department in Public Hospitals.

The abuse of the hospitals, by the majority of the patients, has led in all the larger cities of Austria to such an intolerable state of affairs that vigorous efforts are now being made to improve the prevailing conditions. As all the hospitals are public institutions, they have no private governors, and no letters of admission are required to obtain a bed or treatment as out-patient. Nominally, only the poor classes of the population are permitted to seek relief in the hospitals, but in the course of time all, even the better well-to-go classes, have sought and obtained help gratuitously. The more the hospitals were used, the less the offices of private physicians were frequented, and in the year 1882 another enormous reduction of the possible patients for private practice was effected by a law called the Krankenkassen Gesetz, which decreed the organization of sick-relief or invalidity societies for all persons occupied or employed in factories, shops, industrial concerns, or commercial undertakings, who were not owners of that concern. Thus the middle class practice was cut down to a ridiculously low extent, as such relief societies were bound to appoint a doctor for each district, at a proportion of about one to every 7,000 or 7,500 members. This contract physician has to give free medical help and aid to them, and the remedies and medicines are also provided free to the members. These "Kassen-doctors," of whom there are about 240 in Vienna, have made it their routine practice to send all chronic cases to the public hospital, so as to save themselves the trouble and save their "Kasse" part of the expense. At last the burden on the state became too heavy, and the combined efforts of the private practitioners and the board of health have effected the adoption of new regulations relating to hospitals. Only such patients as ca prove their poverty or want of means by a certificate given by the board of managers will obtain free medical help in hospitals. No members of a "Kasse" will be accepted as patients except on payment of the full fees; the same holds good of other classes of patients who, of course, may obtain admission, but will have to pay for medical services as they would have to pay a private doctor. The largest hospital in Vienna had last year (1905) over 25,000 in-patients and nearly 600,000 out-patients, and such figures are sufficient to show the need of immediate reform. No doubt the new drastic measure will have the effect of bringing the patients oftener to the physician's office than it was the custom hitherto, and the state will save large sums hitherto expended for those who can well afford to pay for themselves. First aid will, of course, be free in all cases, as formerly, in the hospitals; only the later treatment is affected by the new regulations.

Insurance Fees and Lodge Practice

The Recent Reduction in Insurance Fees.

The physicians of Bristol, Tennessee-Virginia, have notified the New York life insurance companies that they will not accept the recent reduction in fees for examination for life insurance. In a letter to the medical director of one of the large companies, one of the physicians of Bristol writes:

When your company, along with other New York companies, manifested such little regard for the rights of the medical examiners, on whom the safety of all their interest depends, by reducing their compensation for examinations on account of a law made necessary by the acts of others, the physicians of Bristol concluded that the time had arrived for them to determine and agree on the proper fees for this kind of professional service, regardless of the law of New York or any state, and the rates for examinations for insurance stated in the enclosed circular were adopted unanimously, and every physician in Bristol and vicinity subscribed to the agreement and pledge to adhere to them. Therefore, the matter of fees for life insurance examinations in this city is no longer one to be adjusted by the companies.

The circular to which reference is made states that examination for ordinary old-line insurance will be $5; when urinalysis is omitted, $3, and examinations for fraternal or industrial insurance, from $2 to $3.

Societies Take Action.

FLORIDA STATE MEDICAL SOCIETY.

The following resolutions were offered by Dr. R. S. Mallory Kennedy, chairman of the committee appointed the morning of the same day to draft suitable resolutions concerning life insurance examination fees, as follows:

WHEREAS, There is a tendency on the part of old-line or legal reserve life insurance companies to reduce the minimum fee paid for medical examination to $3.00; and

WHEREAS, It being the unanimous sentiment of the members of the Florida State Medical Association in session at Gainesville, Fla., April 19, 1906, that a minimum fee of $3.00 is not a just compensation for the services rendered and responsibility assumed; therefore, be it

Resolved, By the Florida State Medical Association that on and after July 1, 1906, no member of this association shall make a medical examination for any insurance company, old-line, fraternal or assessment, now licensed to transact business in this state, or any insurance company, which may hereafter be licensed to transact business in this state, for less than $5.00 an examination and that an additional fee of $5.00 be charged where a microscopic examination is required; and be it further

Resolved, That a copy of these resolutions be sent at once to the secretary of each component society for their action, and that said societies after acting on the matter shall forward at once the result of said action to the secretary of the State Medical Association, who in turn shall notify each secretary of the component medical societies of the final action taken.

On offering an amendment to the foregoing, the amendment to read: "That these resolutions are endorsed by the Florida State Medical Association, in annual session at Gainesville, Fla., April 19, 1906," the same was endorsed by a vote of the members present.

Similar resolutions were passed by the Escambia County (Fla.) Medical Society.

OTHER SOCIETIES.

At a meeting of the Matagorda County (Texas) Medical Society, held June 16, a resolution was adopted making the regular fee for life insurance examinations $5; if urinalysis is omitted, the fee is $3. For fraternal insurance examinations the fee is $3. The members of the society also pledged themselves to support the companies which now pay the $5 rate.

At a recent meeting of the Smith County (Texas) Medical Society, resolutions were adopted protesting against the cut in fees. A committee was also appointed to consider the matter further.

At the June meeting of the Center County (Pa.) Medical Society, a resolution was unanimously passed that no member of the society shall make an examination for life insurance requiring a urinalysis for a less fee than $5.

Dr. Joseph S. Leach, Glasgow, Ky., writes that as a result of Dr. McCormack's address before the Barren County (Ky.) Medical Society, that society has passed resolutions not to examine for regular life insurance companies for less than $5.

Dr. J. W. Trisler, Marion, Ky., writes that the Crittenden County (Ky.) Medical Society has passed a resolution making the minimum fee for old-line life insurance examinations $5.

Correspondence

A Carelessly Edited Medical Journal.

MESCALERO, N. M., June 22, 1906.

To the Editor:—I admire THE JOURNAL for its unremitting fight for the correction of abuses in the medical profession. I am writing now to call attention to one that has not hitherto been taken up, but concerning which I feel a few words editorially would not be amiss.

There is a monthly medical journal which comes to my desk regularly but whose stay there is short, as it generally finds its way promptly to the waste basket. This is not because my time is so limited that I can not spend an hour now and then with medical journals, but because, after looking over the first copy or two and finding it so carelessly gotten up, filled with misprints, misspelled words, etc., I have not the slightest respect for it as an authority or as a disseminator of medical news or the thoughts of its contributors. The last number I glanced over rather cursorily and my eye fell on some errors so flagrant that I felt they should not be allowed to go by unnoticed. Some of them might be typographical (which are rarely excusable in a first-class journal), but, alas, others I fear, can not be justly charged to the poor typesetter. These may seem small matters, but nevertheless are to the periodical what cleanliness and good manners are to the individual. The physician who is careless about his linen, fails to keep his finger nails clean, and who is ill-mannered, can not hope to gain the respect of his fellows, either professional or lay, and they will show very little regard for his professional opinions, which in nine cases out of ten will not be entitled to much regard. So with the publication that is carelessly gotten up. As such a physician as above described would be a blot on the profession as a whole, so such a medical journal is. Far better it would be if it were not published at all. Such a publication as the one I mention is a disgrace to our profession. I am sending it to you under separate cover; it is a type of a large number of medical journals. Some of the most flagrant errors are marked in the copy sent to you.

R. I. MCNEIL.

Use of Inferior X-Ray Tubes.

SPRINGFIELD, MASS., June 16, 1906.

To the Editor:—At the Boston session of the American Medical Association one of the things that struck me very forcibly was the number of good exhibits of *x*-ray apparatus made almost useless through inferior tubes. Apparatus that *per se* seemed powerful enough, developed no clear-cut image on the screen. In many instances complicated foreign tubes were being exploited. These were expensive and seemed to me only remarkable for the amount of inverse discharge they recorded. I have for some time been using Green and Bauer American-made tubes and find them much better than the imported Gundelach tubes I formerly employed. Why go past a good American product for an inferior foreign make? I agree very heartily with Dr. Piffard in his paper concerning the value of tubes that these (tube No. 2 being G. & B.) are remarkable not only as to lack of inverse but for rapidity and definition. Dealers should give attention to so important a matter and not spend all their energy in the construction of the apparatus only to spoil the ultimate result by tubes that do not work in harmony with their product.

H. W. VAN ALLEN, M.D.

Empyema of the Pleura.

NORWOOD, LA., June 17, 1906.

To the Editor:—In THE JOURNAL, June 16, page 1895, I notice that Braun, in his lecture, says that he does not think that simple puncture and aspiration will effect a cure in all cases of empyema in the pleura, and that he favors resection, etc.

Regarding aspiration, he is certainly right, for it will not cure in any case. If the diagnosis is made promptly, i. e., within the first week or ten days, a simple incision under local anesthesia in the intercostal space with drainage will cure without the necessity of resection.

Of course, if days or weeks elapse after the formation of pus, or if the patient is tuberculous, even after resection the prognosis is unfavorable.

The aspirating needle has only one place here, and that is for purpose of diagnosis, after which the needle should not be withdrawn, but should be left *in situ* as a guide for the knife, which should immediately follow. This is a point to be especially remembered by young operators.

W. F. HAGAMAN, M.D.

Marriages

W. H. CARLTON, M.D., to Miss Susie Lucas, both of Athens, Ga., recently.

A. J. EVANS, M.D., to Miss Jessie Merritt of Pleasantville, Iowa, June 27.

HOWARD EASTMAN, M.D., to Miss Mamie C. Miller, both of Baltimore, June 19.

RICHARD F. BIGGER, M.D., to Mrs. Anna M. Hill, both of Indianapolis, June 19.

GLENN W. ADAMS, M.D., Cincinnati, to Ida E. Scott of Harrison, Ohio, June 20.

LESTER R. COBB, M.D., Belleville, Mich., to Mrs. Carrie Moon at Detroit, June 13.

JOHN A. FRITCHEY, M.D., to Miss Ella Shoop, both of Harrisburg, Pa., June 24.

FAYETTE DUNLAP, M.D., Danville, Ky., to Miss Lin Lithgow of Louisville, June 20.

ELMER J. HAGENBAUGH, M.D., to Miss Ella Conn, both of Elkhart, Ind., May 16.

P. J. BRANNON, M.D., to Miss Genevieve Anne Lally, both of Denison, Iowa, June 19.

WILL H. LESTER, M.D., Greenville, Mich., to Miss Effie Carroll of Detroit, June 23.

HUGO W. AUFMWASSER, M.D., to Miss Stella Blau, both of Covington, Ky., June 21.

WILLIAM H. DITMARS, M.D., to Miss Anna Green, both of Jonesville, Mich., June 10.

JAMES LEWIS FLEMING, M.D., Chicago, to Miss May Ormsby, Dougherty, Iowa, June 20.

LEONARD H. BUSSEN, M.D., to Miss Anna Brady, both of Valley City, N. D., June 20.

CHARLES BERTRAM ENSOR, M.D., to Miss Francis C. Bennett, both of Baltimore, June 18.

WILLIAM ALLEN ETHERIDGE, M.D., to Miss Annie C. Voelker, both of Baltimore, June 27.

JOSEPH W. HOLLAND, M.D., to Miss Pearl Huntington Robins, both of Baltimore, June 20.

RICHARD M. COGAN, M.D., Philadelphia, to Miss Maud Logee of Providence, R. I., June 21.

WALTER DEN BLEYKER, M.D., to Miss Marion Brownell, both of Kalamazoo, Mich., June 26.

ELBERT A. BING, M.D., Browns, Ill., to Miss Cora Estes Whitson of Johnsonville, Ill., June 27.

CLARENCE K. HAGGARD, M.D., Moody, Texas, to Miss Ella Baggett of Belton, Texas, recently.

VICTOR J. LAROSE, M.D., Mandan, N.D., to Miss Rose McHugh of Bismarck, N. D., June 14.

GEORGE D. BUXTON, M.D., Proctorville, Vt., to Miss Veronica Nichols of Burlington, Vt., June 14.

PRENTISS B. CLEAVES, M.D., Cherokee, Iowa, to Miss Jane Delaplaine of Tipton, Iowa, June 11.

FRANK E. CROSIER, M.D., Lebanon, Ohio, to Miss Annice Poore, at Murray Hill, Ohio, June 7.

LUCIAN FREDERIC BLALOCK, M.D., Ocala, Fla., to Miss Irma Richardson of Atlanta, Ga., June 14.

BRUCE B. GIFFEN, M.D., St. Clairsville, W. Va., to Miss Livingston of Columbus, Ohio, June 22.

THOMAS ALPHEUS EVANS, M.D., to Miss Wilhelmina Loechler, both of Columbus, Ohio, June 27.

WALTER E. KREHL, M.D., Battle Creek, Iowa, to Miss Sylvia Duncan of Iowa City, Iowa, June 14.

PATRICK V. CUNNINGHAM, M.D., Providence, R. I., to Miss Anna D. Hamley, at Baltimore, June 27.

GEORGE G. ARMSTRONG, M.D., Buffalo, N. Y., to Miss Jane Dare Johnson, at Warrenton, Va., June 16.

A. E. BESSETTE, M.D., San Marcial, N. M., to Miss Mamie Toomey of Chicago, at San Marcial, June 21.

W. EMMETT MCCLAIN, M.D., Packwood, Iowa, to Miss Elizabeth Agnes Burns of Keokuk, Iowa, June 20.

JAMES ROBERT CAYWOOD, M.D., Piqua, Ohio, to Miss Elizabeth Young Barber of New York City, June 4.

HUBBARD NORTH BRADLEY, M.D., Bay City, Mich., to Miss Harriet R. Wyman of Ann Arbor, Mich., June 25.

DEXTER P. CANNADAY, M.D., Hugheston, W. Va., to Miss Elizabeth Haven Vermillion of Poplar Hill, Va., May 2.

Deaths

Charles Rollin Head, M.D., College of Physicians and Surgeons in the City of New York, 1848, a member of the Wisconsin legislature in 1853, 1855, and 1862, the author of the bill abolishing capital punishment in Wisconsin, surgeon of the board of enrollment of the second congressional district from 1863 to 1865, founder of Albion College, and at one time secretary of the State Board of Pension Examiners, for more than fifty years a resident of Albion, Wis., died at his home in that place from senile debility, June 19, aged 86.

William Duff Bullard, M.D., College of Physicians and Surgeons in the City of New York, 1895, a member of the American Medical Association, New York Academy of Medicine, and the New York Physicians' Mutual Aid Association; adjunct professor of surgery in the New York Post-Graduate Hospital, and later assistant surgeon of the Hospital for the Ruptured and Crippled, died at his home in New York City, June 20, after a short illness, aged 34.

Lapsley Yancey Green, M.D., University of Louisville Medical Department, 1852, a member of the Tennessee State Medical Association, and an honorary member of the Chattanooga and Hamilton County Medical Society, a surgeon in the Confederate service during the civil war, died at the home of his daughter on Lookout Mountain, June 21, after a short illness, aged 78.

Sidney O. Heiskell, M.D., College of Physicians and Surgeons, Baltimore, 1881; assistant and physician in charge at the quarantine station on the Patapsco River since the time of his graduation, excepting for two years; acting past assistant surgeon in the navy during the Spanish-American war, died suddenly at the quarantine station, June 22, from cerebral hemorrhage, aged 53.

Thomas De L. Burckhalter, M.D., Medical College of the State of South Carolina, Charleston, 1895, of New York City, died at St. Vincent's Hospital, New York City, June 20, from disease of the kidneys and liver, after an illness of five weeks, aged 30.

Arthur Grattan Cabell, M.D., Medical College of Virginia, Richmond, surgeon U. S. Navy, retired, a prominent citizen of Richmond, died at the home of his brother in that city, June 19, from cerebral hemorrhage, aged 52.

Charles F. Faber, M.D., Department of Medicine of the University of Pennsylvania, Philadelphia, 1886, for ten years a practitioner in Cairo, Egypt, died in Philadelphia, June 23, from tuberculosis, aged 41.

William G. Hare, M.D., Faculty of Medicine of Queen's University, Kingston, Ont., 1892, of Bay City, Mich., was drowned in Saginaw Bay by the capsizing of a steam launch, June 19, aged 42.

Robert Gover Allen, M.D., Jefferson Medical College, Philadelphia, 1839, assistant surgeon in the army during the civil war, died at his home in Darlington, Md., June 24, aged 84.

Otho H. Arndt, M.D., Rush Medical College, Chicago, 1896, died at his home in Oconto Falls, Wis., June 16, from the effects of carbolic acid, accidentally administered, aged 35.

John F. Alexander, M.D., Cleveland, Ohio, died at his home in Centre Hall, Pa., May 29, from tuberculosis of the spine, after a protracted illness, aged 57.

W. R. Harbin, M.D., Medical College of the State of South Carolina, Charleston, 1858, died in Calhoun, Ga., June 6, from senile debility, aged 74.

Ashford Brown, M.D., 1844, died at his home in Webster, W. Va., June 15, aged 85.

Deaths Abroad.

John Henry Bryant, M.D., London, 1891, M.R.C.P., 1895, and F.R.C.P., 1901, assistant physician to and lecturer on materia medica and therapeutics at Guy's Hospital, died at Walmer Kent, aged 38. His death removes one of the ablest of the younger London physicians. A career marked by good work and offering still greater promise, has been cut short. Dr. Bryant entered Guy's Hospital in 1886, where he distinguished himself as a student, winning among other prizes the treasurer's gold medal in medicine and surgery in 1891. He graduated M.B., B.S., London, in 1890, taking first class honors and the gold medal in medicine, and first class honors in forensic medicine. In 1892 he was appointed medical registrar to Guy's Hospital, which he held for seven years, until he became assistant physician in 1898. In 1899 he became demonstrator of morbid anatomy and in 1903 lecturer on materia medica and therapeutics. He had a great reputation as a teacher; he had the gift of systematizing work and lucidly expounding doctrine. Everything he did was marked by thoroughness. He wrote out all his lectures before delivery and never slurred over a single point which could help the student. His writings were of high merit.

B. Tarnovski, M.D., the leading Russian authority on syphilis and cutaneous diseases, died at Paris in May, aged 68. He was the founder and president of the St. Petersburg Dermatological Society, and has published numerous works on syphilis, etc. He bequeathed his handsome estate at Jalta to be used as a sanatorium for physicians.

Forbes Tulloch, lieutenant of the Royal Army Medical Corps, died from sleeping sickness in the Alexandria Hospital at Millbank, June 26. Lieutenant Tulloch contracted the disease in Uganda, where he was sent as a member of the commission to investigate the causes of the disease and the means of prevention.

H. Obst, M.D., professor of ethnology and anthropology at Leipsic, died in May, aged 69. His atlas of anatomy has passed through two editions.

Miscellany

The New Buildings at Harvard.—The new buildings of the Harvard Medical School, which will be dedicated in September next, were much admired at the Boston session of the American Medical Association, being the meeting places of many sections and the scene of the long-to-be-remembered afternoon teas. They are built according to a consistent architectural plan around three sides of a quadrangle, the administration building being at one end and flanked on each side by two of the four laboratory buildings, which are devoted to anatomy and histology, physiology and chemistry, pharmacology and hygiene, and bacteriology and pathology. Each laboratory building consists of two wings connected by a central portion fronting the court. The building material is white marble and the style is classic adapted from the Greek. With the exception of chemistry the laboratories are constructed to accommodate small classes of 24 students, a number being provided in each building. Abundant light is secured and provisions are made for possible expansion so as to treble their present capacity. Numerous rooms for private research are provided. All the buildings are connected by corridors, which also contain lockers for students' use. The central portion of each building is provided with an amphitheater with preparation rooms on each side. The best acoustic properties have been carefully secured. Dark rooms for instruction in ophthalmology are secured in the physiology building by cutting off the light by means of rolling screens. An animal operating suite is provided with rooms adjacent for animals undergoing special treatment. General rooms for the animals are provided on the roof, where they have abundant light and ventilation and exercise yards in the open air. The laboratory tables for chemistry have tops of opaque glass made to resist the action of acids. Hoods are provided through which also the ventilation of the room is effected. The floor is of asphalt and the walls are covered with zinc paint. Centrally located in the room are emergency showers as a safeguard in case of fire to clothing occasioned by explosion of apparatus. In the lecture room of the department of physiology and chemistry is

a lecture table, the central portion of which is movable and can be taken to the preparation room loaded with apparatus, and returned to its place. The department of comparative pathology occupies the entire rear portion of the wing devoted to hygiene on all floors. The space given to this department is a striking evidence of the trend of modern investigation. In a similar way the department of photography occupies the rear of one wing of the bacteriology and pathology building. The animal house of the pathology department has rooms and stalls for animals, varying in size from cows to guinea-pigs. The buildings are warmed, lighted and ventilated from a power-house. They are warmed by hot water, lighted by electricity and ventilated by mechanical injection of air screened of dust and warmed by indirect radiators, the foul air being removed by fans located on the roofs. Refrigeration of the room for cadavers and for a room in the chemistry building is secured by the circulation of brine. Refrigeration of the dissecting rooms has been provided for, but has not yet been applied. Steam and compressed air can be supplied from the power-house to the various laboratories. The Harvard Medical School has progressed from three professors, giving two courses of lectures of four months each in 1783, to its present force of 142 professors and instructors, with the requirement of a college degree for admission and a four years' course. The edifice at present occupied was deemed at the time when it was built (1883) ample for the needs of the school for fifty years. Over $3,000,000 have been provided for the erection and maintenance of the new buildings.

More Than Half a Century of Practice.—Dr. Jacob W. B. Wellcome, whose death, April 8, 1906, at his home in Sleepy Eye, Minn., was chronicled in THE JOURNAL April 21, page 1228, was one of the most remarkable men in the history of Minnesota. Dr. John W. Andrews, of Mankato, Minn., a close friend of Dr. Wellcome, sends us a very interesting outline of Dr. Wellcome's life and career. Born in Maine, he first practiced in New England, but later came to the busy frontier of Minnesota, where he spent the rest of his life. He held many positions of honor and responsibility and his career as a physician was one of great credit to him and of happy remembrance for those he leaves behind him. Dr. Andrews says that Dr. Wellcome practiced medicine in the Minnesota Valley more years than any other man, either living or dead. He adds: "Perhaps the most interesting part of his professional career was at Garden City. When he located there in 1858 he was on the extreme border of civilization; to the west lay a broad expanse of prairie, with here and there a settler; the roads were mere paths, the streams without bridges and many of the frontiersmen living in sod houses. The timbered portions of the country prior to 1862 were inhabited by the red man. He and his tepees were more numerous than the white settlers and their shanties. The night was often made hideous by the whoop of the Indian and the howl of the prairie wolf. In winter there were frequent blizzards, rendering traveling not only difficult but dangerous to life and limb. Such was the condition of the country when Dr. Wellcome began his practice in Garden City. Often at great risk to his life in winter he would respond to calls ten, twenty and thirty miles away over the broad prairie and through blinding snow storms. During the spring freshets the danger was no less because of the swollen streams. These the doctor had to ford, sometimes swimming his horses to do so. So large was his practice and so faithfully did he attend to it that in times when there was much sickness he was practically on the road all the time. In 1862 occurred the memorable and most cruel Sioux massacre. Dr. Wellcome was one of the first to take up arms to protect the frontier settlers; for awhile he acted in the double capacity of soldier and surgeon."

Tetanus.—In a communication sent to the Académie de Médecine, Paris (*Progrès Médical*, 1906, No. 1), M. Clement, Val de Grace, reported some experiments on the effect of temperature in tetanus. From seeing a case following exposure to heat without very obvious traumatism, he conceived the idea that high temperature might increase the virulence of the microbe, and therefore he inoculated two guinea-pigs each with 0.2 c.c. of a filtered culture of the tetanus bacillus and exposed one for some time to a high temperature (from 40 to 42 C.). At the end of three days the animal was seized with the symptoms of acute tetanus with dissemination of the germs throughout the organism instead of their being, as usual, localized at the point of inoculation. The other animal remained well. Subsequent experiments led him to believe that it was not the virulence of the germ that was increased, but rather that the resistance to it was decreased; the phagocytes were unable to absorb it, hence its spread throughout the organism. In commenting on the paper, M. Kelsch suggested that low temperatures might likewise diminish resistance and thus account for the occurrence of tetanus *a frigore*. He hoped M. Vincent would extend his inquiry so as to take in this factor, also to supplement the work already done on the effects of temperature in this disease.

Oath Administered to Kansas Students.—At the commencement exercises of the School of Medicine of the University of Kansas the following oath was administered to the members of the graduating class by Dr. Edward W. Shoeffler:

> Realizing the dignity and the sacredness of the practice of medicine on which I am about to enter, I promise to do all in my power to prove myself worthy of this high calling. I will guard sacredly the confidence of my patients. I will not violate the sanctity of any home into which I may be admitted. I will honor my colleagues. I will promote the advancement of the medical sciences. I will do my best to bring honor to my alma mater. I will promote fellowship and harmony in the profession, and do herebe obligate myself to follow the principles of medical ethics promulgated by the American Medical Association.
>
> While I continue to keep this oath inviolate may it be granted me to enjoy life and practice my art respected by all men.

Choice of Anesthetic.—C. Lull, in the *Alabama Medical Journal*, April, 1906, considers the combined statistics of anesthesia, which give one death in 2,948 cases for chloroform to one in 13,986 for ether, as of more value than opinions drawn from individual experience. If the heart is weak ether is the safer remedy; the same is true when the kidneys are affected. Ether appears to be more liable to induce bronchitis and pneumonia, but the amount used and the time and method of administration as well as other circumstances are modifying factors. More remote consequences of anesthesia, status lymphaticus, sepsis, acetonuria, acidosis and hepatic toxemia must not be lost sight of. General anesthesia should be preceded by thorough examination of the heart, lungs and kidneys. In the vast majority of cases demanding anesthesia ether is far safer than chloroform.

The Public Service

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending June 30, 1906:

(Orders issued by Commander-in-Chief of Asiatic Fleet.)

Nash, F. S., surgeon, detached from the *Monadnock* and ordered to the Naval Station, Olongapo, P. I.

Shiffert, H. O., P. A. surgeon, detached from the Naval Hospital, Philadelphia, and ordered to duty with the marine detachment on the Isthmus of Panama, sailing from New York, July 3.

Ely, C. F., asst.-surgeon, detached from duty with the marine detachment on the Isthmus of Panama and ordered home to wait orders.

Woodward, J. S., asst.-surgeon, detached from special duty in the Bureau of Equipment, Navy Department, and ordered home to wait orders.

Pickrell, G., surgeon, detached from the *Franklin*, and granted sick leave for three months.

Geiger, A. J., asst.-surgeon, ordered to the *Brooklyn*.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended June 27, 1906.

Woodward, R. M., surgeon, detailed as member of Revenue Cutter Service retiring board, to convene at Boston, June 28, 1906:

Grubbs, S. B., P. A. surgeon, granted leave of absence for fourteen days, from Aug. 2, 1906.

King, W. W., P. A. surgeon, relieved from special temporary duty at Missoula, Mont., and directed to rejoin station in Washington, D. C.

McClintic, T. B., P. A. surgeon, directed to report to the commanding officers of the Revenue Cutter *McCulloch* for special cruise in Alaskan waters.

McCoy, George W., P. A. surgeon, leave of absence granted for one month, from April 14, 1906, amended to read twenty-five days only.

Warren, B. S., P. A. surgeon, granted leave of absence for four days, from June 22, 1906, under Paragraph 191 of the Regulations.

Warren, B. S., P. A. surgeon, detailed as member of Revenue Cutter Service retiring board, to be convened at Boston, June 28, 1906.

Collins, Geo. L., asst.-surgeon, granted extension of leave of absence for two days from June 28, 1906.

Foster, S. B., acting asst.-surgeon, granted leave of absence for ten days, from June 11, 1906.

Goddard, F. L., acting asst.-surgeon, granted leave of absence for thirty days from June 29, 1906.

Houghton, M. W., acting asst.-surgeon, granted leave of absence for eleven days, from June 20, 1906.

Owen, Henry, acting asst.-surgeon, leave of absence granted for thirty days, from May 25, 1906, amended to be effective June 10, 1906.

Walker, R. T., acting asst.-surgeon, granted leave of absence for four days, from July 11, 1906.

Brown, F. L., pharmacist, granted leave of absence for two days, from June 23, 1906, under Paragraph 210 of the Regulations.

BOARDS CONVENED.

A board of officers was to meet at the Bureau, June 25, 1906, for the purpose of making physical examinations of candidates for position of second assistant engineer in the Revenue Cutter Service. Detail for the board: Asst. Surgeon-General J. M. Eager, Chairman; Assist.-Surgeon J. W. Trask, Recorder.

A board of officers was to meet at the Hygienic Laboratory, July 2, 1906, for the purpose of making an investigation as to the origin and prevalence of typhoid fever in the District of Columbia. Detail for the board: P. A. Surgeon Rosenau, Chairman; P. A. Surgeon L. L. Lumsden, and Dr. J. H. Castle, Recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the week ended June 29, 1906:

SMALLPOX—UNITED STATES.

California: Los Angeles, June 9-16, 1 case.
Florida: General, June 16-23, 4 cases; Jacksonville, 2 cases.
Illinois: Galesburg, June 16-23, 4 cases.
Kansas: Topeka, June 13-20, 1 case.
Kentucky: Covington, June 16-23, 1 case.
Louisiana: New Orleans, June 16-23, 16 cases.
Missouri: St. Louis, June 16-23, 1 case.
New York: Fladley Lake, June 22, 1 case; New York, June 16-23, 4 cases.
North Carolina: Beaufort, June 20, 2 cases.
Ohio: Cincinnati, June 15-22, 3 cases.
Tennessee: Nashville, June 16-23, 2 cases.
Wisconsin: Appleton, June 16-23, 1 case; Milwaukee, 2 cases.

SMALLPOX—INSULAR.

Philippine Islands: Manila, May 5-12, 1 case.

SMALLPOX—FOREIGN.

Africa: Cape Town, May 12-19, 2 cases.
Brazil: Rio de Janeiro, May 13-27, 3 cases.
Canada: Toronto, June 2-16, 10 cases; Winnipeg, June 9-16, 1 case.
Chile: Antofagasta, May 26, 9 cases; Iquique, May 12-19, present; Talcahuana, vicinity, May 19-26, present.
China: Hongkong, May 12-19, 2 cases, 1 death; Shanghai, May 19-26, 1 death.
France: Marseilles, May 1-31, 1 death; Paris, May 26-June 2, 6 cases.
Germany: Bremen, May 26-June 2, 1 death.
Great Britain: Hull, May 26-June 2, 2 cases; Liverpool, June 2-9, 2 cases.
Greece: Athens, May 28-June 4, 2 deaths.
India: Bombay, May 22-29, 5 deaths; Calcutta, May 12-19, 44 deaths; Karachi, May 20-27, 19 cases, 4 deaths; Madras, May 19-26, 4 deaths; Rangoon, May 12-19, 17 deaths.
Italy: General, May 31-June 7, 18 cases, Messina, May 26-June 2, 1 death.
The Netherlands: Groningen, April 15-30, 5 cases.
Russia: Moscow, May 26-June 2, 4 cases, 2 deaths; Odessa, May 26-June 2, 14 cases; St. Petersburg, May 12-June 2, 27 cases, 8 deaths.
Spain: Cadiz, May 1-31, 1 death.
Turkey: Constantinople, June 3-10, 1 death.
Switzerland: Zurich, May 26-June 2, 1 case.

YELLOW FEVER—UNITED STATES.

Louisiana: Mississippi River Quarantine, June 23, 1 case (imported from Habana on S.S. *Holstein*.
Brazil: Rio de Janeiro, May 13-27, 1 case.
Honduras: Choloma, June 2-9, present; Pimienta, present; San Pedro, present.
Mexico: Merida, June 1-16, 2 cases, 2 deaths.

CHOLERA—INSULAR.

Philippine Islands: Manila, May 10-17, 6 cases, 6 deaths.

CHOLERA—FOREIGN.

India: Bombay, May 22-29, 32 deaths; Calcutta, May 12-19, 37 deaths; Rangoon, May 12-19, 2 deaths.

PLAGUE.

Brazil: Rio de Janeiro, May 13-27, 1 case.
Chile: Tacna, May 26, present.
China: Hongkong, May 12-19, 90 cases, 83 deaths.
Egypt: Alexandria, June 4-5, 1 case, 1 death; Kench, June 2-7, 6 cases, 4 deaths; Minieh, June 1-7, 4 cases, 4 deaths.
India: General, May 5-12, 13,207 cases, 11,414 deaths; Bombay, May 22-29, 317 deaths; Calcutta, May 12-19, 42 deaths; Karachi, May 20-27, 101 cases, 96 deaths; Rangoon, May 12-19, 49 deaths.
Japan: Hiroshima-Ken, June 5, present; Kobe, present; Yokohama, 1 case (on S. S. *Siberia*).
Peru: Mollendo, May 15-23, 1 case.

Queries and Minor Notes

RECIPROCITY WITH MINNESOTA.

BOONE GROVE, IND., June 24, 1906.

To the Editor:—What states reciprocate with Minnesota?

J. B. S.

ANSWER.—Illinois, Iowa, Kansas, Michigan, Maine, Maryland, Missouri, Nevada, New Jersey, Nebraska, Ohio, South Carolina, South Dakota, Wisconsin and Wyoming. See THE JOURNAL, May 19, 1906, page 1548

RECIPROCITY WITH OHIO.

To the Editor:—Under the amendment of March 19, 1906, to the Ohio law, what states are granted reciprocity with Ohio?

A. B. C.

ANSWER.—Illinois, Indiana, Maine, Maryland, Michigan, Minnesota, Nebraska, New Jersey and Wisconsin. Ohio expects soon to increase this list.

PHENACETIN AND ACETPHENETIDIN.

INDIANA, June 28, 1906.

To the Editor:—What is the difference chemically between Phenacetin (Bayer) and Acetphenetidin U. S. P.? C. A.

ANSWER.—The names "phenacetin-Bayer," "acetphenetidin," "acetphenetidinum U. S. VIII," refer to the same chemical substance. Although the United States patent on phenacetin has expired, the manufacturer claims that the names "phenacetin" and "phenacetin-Bayer" are still protected by trade-mark, and for this reason the article was made official under a name indicating its chemical composition. In the British, German and Swiss pharmacopeias it is official as phenacetinum.

Association News

Acceptance of President-Elect Bryant.

NEW YORK, June 27, 1906.

To the General Secretary,
American Medical Association:

I am in receipt of your communication notifying me of my election by the House of Delegates to succeed the illustrious gentleman, Dr. William J. Mayo, as President of the Association. I earnestly desire through you to express to the Association my grateful appreciation of the honor conferred on me by my selection for so high a station of confidence and trust. I regard this action as being chiefly an earnest of the desire to emphasize in no uncertain manner the great delight experienced by the members of the Association because of the rehabilitation of the entire profession of this state in the councils of the parent organization. I believe that I can assure the parent body that the profession of this state will ever be found presenting a united front in the support of all wise and beneficent efforts directed to advancing the ennobling interests of the Association.

JOSEPH D. BRYANT.

Correction of the Official Minutes.

Dr. F. F. Simpson, Pittsburg, writes concerning the report of the Committee on the Improvement of Treatment of Uterine Cancer, presented at the Boston session, which outlined the establishment of a department of public instruction by the American Medical Association and presented a plan for the organization of such a department. Dr. Daniel H. Craig, Boston, moved that the report of the committee be adopted and that the president appoint a committee of seven to investigate the matters suggested therein, such committee to report at the next annual session. This committee of seven members, whose names appear on page 1879 of the official minutes, as published in THE JOURNAL, June 16, should be designated as the Committee on Plan of Organization of a Board of Public Instruction.

OFFICIAL MINUTES OF THE SECTIONS.

The following are the official minutes of the sections:

Section on Practice of Medicine.

TUESDAY, JUNE 5—AFTERNOON.

Dr. Herbert C. Moffitt, San Francisco, was in the chair, and the secretary was Dr. Joseph L. Miller, Chicago.

Dr. Philip Marvel of Atlantic City, N. J., read a paper entitled

"Some Clinical Observations in a Case of Acute Lymphatic Leukemia, Suggesting Infection as an Etiologic Factor in the Disease." Discussed by Dr. Cabot.

Dr. J. Dutton Steele of Philadelphia read a paper entitled "Intermittent Fever in the Convalescence of Typhoid," which was discussed by Drs. Rochester, Stockton, Hare, Smith, Hughes, Witherspoon, Einborn, Sippy and Steele.

Dr. James E. Talley of Philadelphia followed with a paper entitled "Post-Critical Fever and Other Sequelæ of Croupous Pneumonia, which was discussed by Drs. Rochester, Davis, Lichty, Alexander, Lambert and LeRoy.

Dr. De Lancey Rochester of Buffalo, N. Y., reported "A Case of Septicemia from the Colon Bacillus."

Dr. George Dock of Ann Arbor, Mich., read a paper entitled "Proprietary Remedies and Their Abuses."

Dr. Richard C. Cabot of Boston read a paper on "The Physician's Responsibility in the Nostrum Evil."

These two papers were discussed by Drs. Thayer, Hare, McClellan, Cohen, Hutchinson, Francine, LeRoy, Dock and Cabot.

Dr. D. L. Edsall of Philadelphia read a paper entitled "Indications and Contraindications to the Use of X-Rays in Medical Cases." Discussed by Drs. Brown, Price and Edsall.

TUESDAY, JUNE 5—EVENING.

Dr. Richard C. Cabot of Boston demonstrated an apparatus for the reproduction of cardiac and respiratory sounds and its use in teaching these signs.

Dr. E. A. Locke of Boston reported cases of Paget's disease.

Dr. Judson Daland of Philadelphia demonstrated the Leishman-Donovan bodies.

WEDNESDAY JUNE 6—MORNING.

This Section held a joint meeting with the Section on Surgery. For minutes of the joint meeting see minutes of the Surgical Section.

WEDNESDAY JUNE 6—AFTERNOON.

At a joint meeting with the Section on Pathology and Physiology at the Y. M. C. A. Building, there was a symposium on "Diseases of the Lung." Dr. Joseph A. Cappe of Chicago read a paper on "Some Observations on the Effect of the Withdrawal of Fluid from the Thorax on the Blood Pressure."

Dr. Sherman G. Bonney of Denver followed with a paper on "Chronic Non-Tubercular Affections of the Lung."

Dr. John H. Musser of Philadelphia read a paper on "The Diagnosis and Treatment of Abscess, Loculated Empyema and Gangrene of the Lung."

Dr. Frederick Forchheimer of Cincinnati read a paper on "Treatment of Pleurisy with Effusion."

Dr. Percy Musgrave of Boston contributed a paper entitled "Cytology of Pleural Effusions."

Dr. L. W. Ladd of Cleveland, Ohio, followed with a paper on "The Bacteriology of Pleural Effusions."

THURSDAY, JUNE 7—MORNING.

In a symposium on "Diseases of the Heart," papers were read as follows:

"Recent Advances in Physiology of the Circulation," by Dr. Joseph Erlanger of Baltimore.

"A Study of the Heart in Chorea." by Dr. W. S. Thayer of Baltimore.

"Pericarditis," by Dr. N. S. Davis of Chicago.

"Relations of the Heart in Chronic Nephritis," by Dr. Nathaniel B. Potter of New York City.

"True and False Angina Pectoris," by Dr. James M. Anders of Philadelphia.

The symposium was discussed by Drs. Gross, Hutchinson, Jones, Thayer, Tyson, Clayton, Cooper, Norris, Sippy, Rochester, Black, Potter and Anders.

Dr. A. Jacobi of New York also read a paper he was to have read in the discussion of the papers of Drs. Dock and Cabot, on Tuesday, on "Proprietary Remedies."

The nominating committee was as follows: Drs. B. W. Sippy, Chicago; George C. Smith, Boston, and Frank Jones, Memphis.

The election of officers resulted as follows: Chairman, Dr. Thomas H. Coleman, Augusta, Ga.; secretary, Dr. Joseph L. Miller, Chicago; delegate, Dr. Nathaniel B. Potter, New York; alternate, Dr. Joseph Erlanger, Baltimore.

THURSDAY, JUNE 7—AFTERNOON.

SYMPOSIUM ON DISEASES OF THE JOINTS.

Dr. Lewis Conner of New York City read a paper on "Acute Articular Rheumatism."

Dr. John A. Witherspoon of Nashville, Tenn., read a paper on "Gonorrheal Arthritis and Gonorrheal Septicemia."

Dr. James B. Herrick of Chicago read a paper entitled "Differential Diagnosis of the Rheumatoid Affections."

Dr. L. F. Barker of Baltimore read a paper on "Joint Affections in Nervous Disease."

Drs. Edwin A. Locke and Robert B. Osgood of Boston read a paper on "The Treatment of Chronic Non-Tuberculous Arthritis."

The symposium was discussed by Drs. Goldthwaite, McCaskey, Walsh, Rogers, Hutchinson, Skinner, Conner, Witherspoon, Herrick and Barker.

FRIDAY, JUNE 8—MORNING.

Dr. Franklin W. White of Boston read a paper on "The Value of Tests for Invisible Hemorrhage in the Diagnosis and Treatment of Diseases of the Digestive Organs."

Dr. Bertram W. Sippy of Chicago read a paper on "Studies on Cardiospasm."

Dr. A. O. J. Kelly of Philadelphia read a paper on "Non-Calculous Cholecystitis."

Dr. Christopher Graham of Rochester, Minn., read a paper on "Differential Diagnosis Between Duodenal Ulcer and Gallstone Disease."

These four papers were discussed by Drs. Meltzer, Hough, McCaskey and Sippy.

Dr. Ernest Bradley of New York City read a paper on "The Technic and Clinical Results of the Opsonic Index in Medicine."

Dr. Norman Ditman of New York City followed with a review of the literature of the opsonic index in medicine.

These two papers were discussed by Dr. Potter.

SYMPOSIUM ON CAUSES AND TREATMENT OF HEADACHES

Papers were read as follows:

(a) "Affections of the Nose and Adjacent Sinuses as a Cause of Headache," by Dr. C. G. Coakley of New York City.

(b) "The Relation of Eye Strain to Chronic Headache," by Dr. George M. Gould of Philadelphia.

(c) "Headaches Due to Aural Disease," by Dr. Philip Hammond of Boston.

(d) "Constitutional Headaches," by Dr. George L. Walton of Boston.

(e) "Headaches Due to Affections of the Pelvic Organs," by Dr. F. L. Davenport of Boston.

Section on Obstetrics and Diseases of Women.

TUESDAY, JUNE 5—AFTERNOON.

The Section was called to order by the chairman, Dr. C. S. Bacon, of Chicago, at Chickering Hall, at 2:15 p. m. Dr. W. P. Manton, Detroit, was secretary.

The chairman then read his address, "The Legal Responsibility of the Physician for the Unborn Child."

On account of the death of two members of the executive committee, the chairman appointed to serve in their places Dr. George H. Washburn of Boston and Dr. Frank T. Andrews of Chicago.

Dr. J. L. Lawrence of Columbus, Ohio, moved that a committee of three be appointed to draft suitable resolutions concerning the deaths of Drs. Dudley and Dunning. Seconded and carried.

The chairman thereon appointed Dr. J. L. Lawrence of Columbus, Ohio, Dr. J. H. Carstens of Detroit and Dr. Reuben Peterson of Ann Arbor, Mich.

"Fibroid Tumors of the Uterus." A Study of 2,274 Consecutive Cases, Including Also a Study of 2,544 Myomata Uteri in Their Relation to Cancer of that Organ," by Dr. Charles P. Noble, Philadelphia. Discussed by Drs. G. Betton Massey, Philadelphia; H. J. Boldt, New York; J. H. Carstens, Detroit; Seth C. Gordon, Portland, Maine; J. L. Lawrence, Columbus, Ohio; Henry O. Marcy, Boston; Alfons von Rosthorn, Heidelberg, Germany; A. Dührssen, Berlin, Germany; C. C. Frederick, Buffalo, N. Y.; Hamilton, Cleveland, Ohio; Edward Reynolds, Boston; J. Wesley Bovée, Washington, D. C.

Before the discussions of Drs. Reynolds and Bovée, it had been moved, seconded and carried to ask these two gentlemen to discuss the paper.

"The Treatment of Tuberculosis of the Urinary Tract in Women," by Dr. Edgar Garceau, Boston.

"The Formation of a Vesico-Vagino-Rectal Fistula Combined with Closure of the Introitus Vaginæ for the Purpose of Overcoming Certain Forms of Urinary Incontinence," by Dr. Reuben Peterson, Ann Arbor, Mich.

The papers of Drs. Garceau and Peterson were discussed by Drs. C. P. Noble, Philadelphia; J. W. Bovée, Washington, D. C., and Emil Ries, Chicago.

"Report of the Committee on the Nomenclature of Endometritis," by Dr. Ernest F. Tucker, chairman, Portland, Ore.

In the absence of Dr. Tucker, this report was read by Dr. J. G. Clark of Philadelphia.

Dr. H. J. Boldt, New York, N. Y.: I move that this Section bestow its thanks on this committee for its painstaking work and that the report be accepted and the committee discharged. Seconded and carried.

"Success: the Surgical Desideratum," by Dr. A. Ernest Gallant, New York. Discussed by Dr. Rosenthal of Indiana.

A nominating committee was appointed to consist of the three members of the executive committee and Drs. D. R. Craig of Boston and Reuben Peterson of Ann Arbor, Mich.

WEDNESDAY, JUNE 6—MORNING.

"Pathology of Uterine Cancer," by Dr. Thomas S. Cullen, Baltimore.

"The Early Symptoms of Cancer. Report of the Committee on Uterine Cancer," by Dr John G. Clark, Philadelphia.

"The Operative Treatment of Cancer of the Cervix Uteri," by Dr. Emil Ries, Chicago.

"The Present Status and Future Prospects of Operative Treatment of Cancer of the Uterus," by Prof. Alfons von Rosthorn, Heidelberg, Germany.

These four papers were discussed by Drs. J. F. W. Ross, Toronto, Canada; M. I. Rosenthal, Ft. Wayne, Ind.; Charles P. Noble, Philadelphia; J. Wesley Bovée, Washington, D. C.; G. Betton Massey, Philadelphia; E. W. Cushing, Boston; H. J. Boldt, New York; Laura E. Branson, Iowa City, Iowa; Prof. A. Dührssen, Berlin, Germany; J. H. Carstens, Detroit; Philander Harris, Paterson, N. J.

It was moved that the report of the Committee on Uterine Cancer, of which Dr. John G. Clark of Philadelphia is chairman, be adopted and made public.

WEDNESDAY, JUNE 6—AFTERNOON.

"The Preservation of the Functions of the Broad Ligaments in Pelvic Surgery" (Illustrated by lantern slides), by Dr. E. C. Dudley, Chicago. This paper was discussed by Drs. Edward Reynolds, Boston; E. E. Montgomery, Philadelphia; Ralph Waldo, New York; F. J. Taussig, St. Louis; D. H. Craig, Boston.

"The Conservative Surgery of the Ovaries," by Dr. Edward Reynolds, Boston.

"The Present Status of Conservatism in the Surgical Treatment of Tubes and Ovaries," by Dr. J. E. Cannaday, Pain Creek, W. Va.

The above two papers were discussed by Drs. W. M. Polk, New York; Robert T. Morris, New York; J. L. Lawrence, Columbus, Ohio; Seth Gordon, Portland, Maine; H. O. Pantzer, Indianapolis; Gossett, St. Louis; Strauss, New York.

"Hernia of the Ovary and Fallopian Tube," by Dr. Frank T. Andrews, Chicago. Dr. J. H. Carstens, Detroit, discussed this paper.

THURSDAY, JUNE 7—MORNING.

SYMPOSIUM ON THE INDICATIONS FOR AND METHODS OF DILATING THE GRAVID UTERUS.

"Manual and Instrumental Dilatation of the Pregnant and Parturient Cervix," by Dr. J. Clifton Edgar, New York.

"Instrumental Dilatation of the Parturient Uterus," by Dr. Franklin S. Newell, Boston.

These two papers were discussed by Drs. Philander Harris,

Paterson, N. J.; G. M. Boyd, Philadelphia; Charles Staltz, South Bend, Ind.; C. J. Hastings, Toronto, Canada; C. E. Paddock, Chicago; A. Dührssen, Berlin, Germany; A. von Rosthorn, Heidelberg, Germany; W. S. Boardman, Boston; J. H. Carstens, Detroit; R. S. Yarros, Chicago.

"Vaginal Cellotomy," by Prof. A. Dührssen, Berlin, Germany.

The Section voted to allow Dr. H. O. Marcy of Boston to read his paper at this point.

Some of the members desired to discuss the paper of Professor Dührssen. It was put to a vote, 25 being in favor and 35 against it.

"The Best Method of Closure of Aseptic Wounds, Especially of the Abdomen," by Dr. Henry O. Marcy, Boston. Discussed by Drs. E. D. Ferguson, Troy, N. Y.; S. P. Clark, Cambridge, Mass.; A. von Rosthorn, Heidelberg, Germany; A. H. Goelet, New York; Charles Staltz, South Bend, Ind.; J. J. Reynolds, Defiance, Ohio; Strauss, New York; A. Dührssen, Berlin, Germany; W. B. Dorsett, St. Louis.

THURSDAY, JUNE 7—AFTERNOON.

The nominating committee made its report and the following officers were elected: Chairman, J. Wesley Bovée, Washington, D. C.; vice-chairman, Edward Reynolds, Boston; secretary, W. P. Manton, Detroit; delegate, W. B. Dorsett, St. Louis; alternate, C. W. Barrett, Chicago.

"Uterine Myomata Complicated with Pregnancy, with Cases," by Dr. E. E. Montgomery, Philadelphia. Discussion by Drs. S. P. Clark, Cambridge, Mass.; H. L. Boldt, New York; A. Tuttle, Cambridge, Mass.; A. E. Benjamin, Minneapolis; J. H. Carstens, Detroit; Warren, Portland, Maine; C. C. Frederick, Buffalo, N. Y.; W. B. Dorsett, St. Louis; Porter, Ft. Wayne, Ind.

"Pregnancy and Labor Complicated by Anterior Fixation of the Uterus," by Dr. George M. Boyd, Philadelphia. Discussed by Drs. Warren, Portland, Maine; J. W. Bovée, Washington, D. C.; C. C. Frederick, Buffalo, N. Y.; J. L. Lawrence, Columbus, Ohio.

Dr. J. W. Bovée, Washington, D. C., said: I understand that each section is permitted to nominate one distinguished member from each section as an honorary member of the American Medical Association, and that being the case I feel it a great honor and know the Section feels greatly honored in presenting the name of Prof. Alfons von Rosthorn as an honorary member. It was moved, seconded and carried that this nomination be sent to the House of Delegates.

The committee on the deaths of Drs. Dudley, Dunning and Johnson reported as follows:

> The past year has been peculiarly unfortunate for our Section in that death has taken from us three of our prominent members, two of whom had but recently served us as chairmen.
>
> Our loss is not one to be defined by words, and yet it is fitting that some memorial be adopted which will direct attention to their worth, and that it be published in order that by reflecting on their virtues we may, by emulation, in some small way perpetuate them: therefore, be it,
>
> *Resolved, first*, That in the death of Drs. A. Palmer Dudley, L. H. Dunning and Arthur Johnson, the Section has lost three of its most valuable and appreciated members.
>
> *Resolved, second*, That the work of Drs. Dudley and Dunning in the Section and for it as chairmen demonstrated their great scientific worth, their broad philanthropy and their unswerving devotion to duty, their work endearing them to all and giving ample proof of their well-earned right to a permanent place in our memories and affections.
>
> *Resolved, third*, That Dr. Johnson's life work was one of such earnestness and originality that the world of science is richer for his having lived and our Section poorer because of his death.
>
> *Resolved, fourth*, That in the death of these three great and good men we recognize that our loss is also the world's loss.
>
> *Resolved, fifth*, That a copy of these resolutions be spread on the minutes of the Section and published in THE JOURNAL of the American Medical Association, and that an engrossed copy be sent to the family of each of the deceased.
>
> F. F. LAWRENCE,
> J. H. CARSTENS,
> REUBEN PETERSON,
> Committee

The above resolutions were adopted by a rising vote.

"Hand Disinfection," by Dr. Herman J. Boldt, New York. Discussed by Drs. J. H. Carstens, Detroit, and F. F. Lawrence, Columbus, Ohio.

"The Stem Pessary for Amenorrhea and Dysmenorrhea. Some Further Observations," by Dr. J. H. Carstens, Detroit. Discussed by Drs. F. D. Reese, Cortlandt, N. Y.; W. O. Henry, Omaha; A. B. Miller, Syracuse, N. Y.

"To What Extent Can the Gynecologist Prevent and Cure Insanity Among Women?" by Dr. W. O. Henry, Omaha. Discussed by Drs. W. P. Manton, Detroit; F. F. Lawrence, Columbus, Ohio.

The chairman, Dr. C. S. Bacon, Chicago, said: The officers of the Section have been so much helped and assisted by the local committee, of which Dr. Washburn is chairman, that I feel it is not only a pleasure but a duty to acknowledge this; and I should be glad to entertain a formal motion of thanks to this committee for their kindnes: and courtesy to this Section. It was so moved and carried.

The chairman, Dr. Bacon, finding it necessary to make a train, asked Dr. Washburn to take the chair.

"Retroperitoneal Cysts Developing Possibly from the Wolffian Body. Report of Cases," by Dr. Francis Donaghue, Boston. No discussion.

Section on Surgery and Anatomy.

Chairman, Robert F. Weir, New York; secretary, A. MacLaren, St. Paul.

TUESDAY, JUNE 5—AFTERNOON.

The Section convened in Jordan Hall and was called to order by the chairman, Dr. Weir, at 2 p. m.

Prof. F Trendelenburg of Leipzig, Germany, delivered the address on surgery.

On motion, a rising vote of thanks was extended to Professor Trendelenburg for his excellent address.

The chairman announced the names of the following as having been duly elected associate members of the Section: Prof. F. Trendelenburg, Baron Takaki, Japan; Mr. Chas. A. Ballance and Mr. Hamilton Ballance, London, England; Dr. Alex. Thompson, Edinburgh, Scotland; Mr. E. Hurry Fenwick, London, Drs. Richard A. Reeves, F. Shepherd, James Bell, G. A. Armstrong, T. Wesley Mills and Irving Cameron.

"Results of Complete and Incomplete Occlusion of the Abdominal and Thoracic Aorta by Metal Bands," by Dr. W. S. Halsted, Baltimore.

"Additional Experiences in Treatment of Aneurism by Endoaneurismorrhaphy," by Dr. Rudolf Matas, New Orleans.

These two papers were discussed by Drs. Keen, Meyer, McChord, Stillman, White and Matas.

"Tumors of Carotid Gland," by Drs. W. W. Keen and Funcke, Philadelphia. Discussed by Dr. J. D. Bryant.

"Surgical Conception of Sigmoid Pathology," by Dr. H. D. Niles, Salt Lake City.

"Neoplasms of Large Intestine," by Dr. A. T. Jonas, Omaha.

These two papers were discussed by Drs. Wathen, Dawbarn, Dunsmoor, Andrews, Freeman, McGlannan, Stoltz, Boucher, McMillen, Niles and Jonas.

"Surgical Treatment of Femoral Hernia," by Dr. A. J. Ochsner, Chicago.

"Silver Wire Filigree Work," by Dr. W. Bartlett, St. Louis.

These two papers were discussed by Drs. Tuttle, Ferguson, Andrews, Dawbarn and Ochsner.

WEDNESDAY, JUNE 6—MORNING.

SYMPOSIUM ON GASTRIC AND DUODENAL ULCER.

"Causes and Diagnosis of Gastric and Duodenal Ulcer," by Dr. Frank Billings, Chicago.

"When Do Gastric and Duodenal Ulcers Require Surgical Treatment? What Procedures are Necessary?" by Dr. William L. Rodman, Philadelphia.

"Medical Treatment of Gastric and Duodenal Ulcer," by Dr. Alexander Lambert, New York.

"Surgical Treatment of Gastric and Duodenal Ulcer and Its Results," by Dr. W. J. Mayo, Rochester, Minn.

These four papers were discussed by Drs. Hemmeter, Einhorn, Williamson, Spivak, McCaskey, Wathen, Stockton, Andera, Anderson, Francine, Black, Munro, Finney, Billings, Rodman, Lambert and Mayo.

"Recognition and Surgical Treatment of Duodenal Ulcer," by Dr. W. D. Haggard, Nashville.

"Tabulation of Ulcer Cases Recently Treated in Massachusetts General Hospital," by Dr. H. F. Hewes, Boston.

WEDNESDAY, JUNE 6—AFTERNOON.

"Treatment of Exophthalmic Goiter by a Specific Serum; Its Preparation," by Drs. John Rogers and S. P. Beebe, New York.

"Surgical Treatment of Exophthalmic Goiter," by Dr. F. J. Shepherd, Montreal.

These two papers were discussed by Drs. Bacon, Dawbarn, Ochsner, Horsley, Morris, Rodman, Rogers and Shepherd.

"Indications for Surgical Interference in Infections of the Biliary Tract," by Dr. John B. Deaver, Philadelphia.

"Indications for Prostatectomy and Its Results," by Dr. A. H. Ferguson, Chicago.

"Prostatectomy," by Mr. E. Hurry Fenwick, London, England.

These two papers were discussed by Drs. Young, Deaver, Moore and Ferguson.

"Clinical Significance of Variations of Wrist and Ankle," by Dr. Thomas Dwight, Boston. Discussed by Dr. F. J. Shepherd, Montreal.

"Appendicostomy," by Dr. J. P. Tuttle, New York. Discussed by Drs. Meyer, Dawbarn, Weir, McMillen, Coley, Lord, MacLaren and Tuttle.

"Cardiac Stimulation for Suspended Animation by Direct Digital Manipulation," by Dr. H. M. Ricketts, Philadelphia.

"Osteoplastic Resection of the Costal Arch in Order to Reach the Vault of the Diaphragm," by Dr. Willy Meyer, New York.

These two papers were discussed by Drs. Runyan, Eisendrath, Eastman and Meyer.

THURSDAY, JUNE 7—MORNING.

"Radium in Surgical Work," by Dr. Robert Abbe, New York. Discussed by Drs. Gordon, Weir, Heffron.

"Preliminary Position in the Bloodless Treatment of Congenital Hip Dislocation," by Dr. Frederick Mueller, Chicago. Discussed by Drs. Bradford, Gibney, Freiberg and Mueller.

"Further Considerations of Surgery of Spinal Cord and Peripheral Nerves," by Dr. J. B. Murphy, Chicago.

"Results from Surgical Treatment of Facial Palsy and of Brachial Birth Palsy," by Dr. A. S. Taylor, New York.

"Ischemic Paralysis and Contracture of Volkman," by Dr. Chas. A. Powers, Denver.

These three papers were discussed by Drs. Ballance, Cushing, Keen, Roberts, Freeman, Ochsner, Lund, Murphy, Taylor and Powers.

"Spontaneous Intracranial Hemorrhage Associated with Trigeminal Neri," by Dr. H. Cushing, Baltimore.

"Treatment of Fractures of Patella," by Dr. Joseph Ransohoff, Cincinnati. Discussed by Drs. Weir, Powers, Cabot, Gray and Ransohoff.

"Diseases of Urachus," by Dr. J. F. Binnie, Kansas City.

THURSDAY, JUNE 7—AFTERNOON.

The executive committee reported the following nominations for officers of Section: Chairman, Dr. A. D. Bevan, Chicago; vice-chairman, Dr. J. G. Mulford, Boston; secretary, Dr. Harvey Cushing, Baltimore; delegate, Dr. F. B. Lund, Boston.

On motion, the secretary was instructed to cast the unanimous ballot of the Section for the election of these nominees.

"Treatment of Bone Cavities," by Dr. J. E. Moore, Minneapolis.

"Diagnosis and Treatment of Tuberculosis of the Kidney," by Dr. A. D. Bevan, Chicago. Discussed by Drs. Knott, Kelly, Meyer, Ransohoff, Lee, McArthur and Bevan.

"Technic of Operations on Head and Neck," by Dr. George W. Crile, Cleveland. Discussed by Drs. Dawbarn, Crile and Eisendrath.

"Dislocation of Outer End of Clavicle," by Dr. Charles L. Scudder, Boston. Discussed by Dr. Cousins.

"Surgical Treatment of Congenital Hydrocephalus, with Report of Case of Meningocele and Hydrocephalus," by Dr. J. S. Horsley, Richmond, Va. Discussed by Drs. Eastman, Ballance, McGlannan and Horsley.

"Hour-Glass Duodenum," by K. A. J. Mackenzie, Portland, Ore.

"Surgical Aspects of Congenital Cystic Kidney," by Dr. F. S. Land, Boston.

"Capillarity in Intestinal Suturing," by Dr. F. G. Connell, Salida, Colo.

A motion, introduced by Dr. Rodman, was unanimously carried, expressing the sincere thanks of the Section to the distinguished chairman and courteous secretary of the Section for a meeting which has rarely ever been equaled and never exceeded in scientific work.

Section on Hygiene and Sanitary Science.

TUESDAY, JUNE 5—AFTERNOON.

Dr. Denslow Lewis, Chicago, was Chairman, and Dr. Elmer E. Heg, Seattle, Wash., Secretary.

Chairman's Address, "The New Hygiene," by Dr. Denslow Lewis, Chicago, was discussed by Drs. S. A. Knopf, New York, N. Y.; A. D. Lake, Towanda, N. Y.; Denslow Lewis, Chicago, and on motion of Dr. Knopf the Section passed a vote of thanks to its Chairman for his admirable address.

"The Fetich of Disinfection," by Dr. Charles V. Chapin, Providence, R. I., was discussed by Drs. Clarence L. Wheaton, Chicago; W. F. Morrison, Spokane, Wash.; S. A. Knopf, New York; H. D. Holton, Brattleboro, Vt.; J. N. Hurty, Indianapolis; A. D. Lake, Towanda, N. Y.; D. M. Totman, Syracuse, N. Y.; Wallace Clark, Utica, N. Y.; Chas. S. Williamson, Chicago; Geo. T. Patton, New Orleans; Seneca Egbert, Philadelphia; A. Walter Suiter, Herkimer, N. Y.; Charles V. Chapin, Providence, R. I.; Martin Friedrich, Cleveland, Ohio.

By a rising vote the Section adopted the motion of Dr. Chas. S. Williamson, Chicago, to lay on the table the proposal of Dr. A. Walter Suiter, Herkimer, N. Y., asking for a rising vote to secure an expression of the sentiment of the Section with reference to the endorsement of the propositions set forth by the essayist, Dr. Chapin.

"Health Inspection as Applied to the Individual," by Dr. Louis Faugeres Bishop, New York, was discussed by Drs. S. A. Knopf, New York, Martin Friedrich, Cleveland, Ohio; Seneca Egbert, Philadelphia, and Louis Faugeres Bishop, New York.

The Section adopted a motion offered by Dr. A. Walter Suiter, Herkimer, N. Y., to the effect that the Section believes in the fullest discussion of every subject presented, and that every member is entitled to express his views; but that the Section desires to place itself on record as holding that thorough disinfection after communicable diseases is advantageous and desirable.

"The Epidemiology of Plague," by Dr. Ashburton Thompson, Sydney, New South Wales, was read by the Secretary, and by him discussed.

"The Plague in American Cities," by Dr. N. K. Foster, Sacramento, Cal., was read by Dr. T. B. Beattie, Salt Lake City, Utah, and discussed by the Secretary, and by Drs. J. W. Amesse, T. B. Beattie, Salt Lake City, Utah; W. C. Rucker, Marine Hospital Service, Vineyard Haven, Mass.

WEDNESDAY, JUNE 6—MORNING.

The Chairman read a communication from Max Joseph, of Berlin, in which it was stated that owing to the serious illness of his old father he was unable to attend the session.

On motion of Dr. Ludwig Weiss, New York, the Section adopted a resolution of sympathy with Dr. Max Joseph, Berlin, Germany, over the serious illness of his father, and of regret at Dr. Joseph's consequent absence from the session.

Papers on the topic, "Publicity as a Factor in Venereal Prophylaxis," were read by their respective authors, Drs. Prince A. Morrow, New York, and William J. Herdman, Ann Arbor, Mich.

A paper, "Duty of the State in Reference to Venereal Diseases," was read by Dr. Henry D. Holton, Brattleboro, Vt.

Dr. Denslow Lewis, Chairman, read his translation of a paper addressed to the same topic, but under the special title of "The War Against the Venereal Diseases in France," written by Prof. T. Tuffier, Paris, France.

Papers on the topic, "What Shall We Teach the Public Regarding Venereal Diseases?" were read by their respective authors, Drs. Albert E. Carrier, Detroit,; George S. Whiteside, Portland, Ore., and Bransford Lewis, St. Louis.

The participants in the discussion that followed on the broad question of publicity in all its phases and the duty of the state in reference to education along the foregoing lines, were: Drs. Ludwig Weiss, New York; Joseph Macfarlane, Philadelphia; C. E. Woodruff, U. S. Army; Ferd. C. Valentine, New York; Seneca Egbert, Philadelphia; Duncan Bulkley, New York; J. N. Hurty, Indianapolis; William Lee Howard, Baltimore; M. H. Bailey, Cambridge, Mass.

A resolution expressing the opinion that continence is not injurious to health and disapproving the contrary doctrine as a menace to the physical and moral welfare of the individual and of society (introduced by Dr. Prince A. Morrow, New York), and another declaring that gonorrhea, chancroid and syphilis should be made notifiable diseases (introduced by Dr. L. Duncan Bulkley, New York), were approved for submission to the House of Delegates, but were not finally acted on by that body (see THE JOURNAL, June 16, p. 1880, for text and action).

Papers on the topic, "The Prostitute Problem in Relation to Law, Society and Medicine," were read by their respective authors, Drs. Charles G. Cumston, Boston, and Ludwig Weiss, New York.

Dr. Charles Chassaignac, New Orleans, delivered an address, "Etiology of the Social Evil," and the morning session closed with the reading, by Dr. William E. Harwood, Eveleth, Minn., of his paper, "A Practical Lesson in Reglementation," the lateness of the hour precluding discussion (see afternoon session).

Dr. Edward L. Keyes, Jr., New York, moved a vote of thanks to the chairman for the efficient work he has done during the past few years, along the lines of venereal prophylaxis. The motion was carried unanimously by a rising vote.

WEDNESDAY, JUNE 6—AFTERNOON.

Dr. Bayard Holmes, Chicago, read his paper, "The Physical and Evolutionary Basis of Marriage."

Dr. Albert H. Burr, Chicago, read his paper, "The Guarantee of Safety in the Marriage Contract."

Pending arrival of authors of papers, Drs. C. H. Cook, Natick, N. Y.; A. D. Lake, Towanda, N. Y.; H. S. Pomeroy, Boston, spoke on the topics of publicity and education as covered in the papers of the morning session.

Dr. J. Henry Carstens, Detroit, read his paper on the topic, "Education as a Factor in the Prevention of Criminal Abortion and Illegitimacy," the same being then discussed by Dr. John Hunter, Toronto, Canada.

Dr. Henry O. Marcy, Boston, read his paper on the same topic, the latter paper being discussed by Drs. Charles G. Cumston and Henry O. Marcy, Boston.

Dr. C. H. Cook, Natick, N. Y., spoke on the resolution adopted at the morning session with reference to continence, declaring himself unequivocally for the single standard of morality.

Dr. A. Dührssen, Berlin, Germany, read his paper on the topic "The Guarantee of Safety in the Marriage Contract."

Dr. Geo. Frank Butler, Chicago, favored reprints of papers read before the Section being sent out to the laity, and petitioning the postal authorities at Washington for permission to use the mails to that end; also, for publication of the same in the newspapers; and said that he is opposed, to the end of fair, honest treatment to all sufferers, to physicians classifying venereal diseases as "disgusting."

Dr. E. E. Munger, Iowa, spoke on the wiles of quack advertisers for enmeshing youth, and advocated the establishment of the Bureau of Education of the American Medical Association for educating the laity in these matters.

As a guest, and by special permission, Dr. C. W. Burtwell, Boston, spoke on the arduous tasks and great responsibilities imposed on the drug clerk and on the latter's function with reference to administration of gonorrhea, etc.

Dr. Albert H. Burr, Chicago, closed the discussion on his paper; Dr. J. Henry Carstens, Detroit, the discussion on his paper; and Dr. Henry O. Marcy, Boston, the discussion on his paper.

On motion of Dr. Liston H. Montgomery, Chicago, the Section approved a resolution and sent it to the House of Delegates for endorsement, declaring it to be the duty of state boards of health and medical associations to disseminate literature to educate the people on the subject of the great black plague (venereal diseases) as they do regarding tuberculosis and other similar disorders. This resolution is given in THE JOURNAL, June 16, page 1880, with the action taken thereon.

Dr. William Lee Howard, Baltimore, read his paper on the topic, "Protection of the Innocent"; Dr. Edward L. Keyes, Jr., New York, his paper on the same topic, and in the discussion ensuing thereon, the following participated: Drs. Daniel T. Nelson, Chicago; W. D. Calvin, Fort Wayne, Ind.; Roble, Baltimore; J. T. Searcy, Tuscaloosa, Ala.; Edward L. Keyes, Jr., New York.

THURSDAY, JUNE 7—MORNING.

On motion of Dr. Liston H. Montgomery, Chicago, the Section adopted the following:

"*Resolved*, That the Section on Hygiene and Sanitary Science deplores the loss by death of Dr. Charles A. Lindsay, late secretary of the State Board of Health of Connecticut, who for many years was a devoted and regular attendant at our sessions."

Dr. G. Walter Holden, Denver, read his paper, "Municipal and State Control in the Prevention of Tuberculosis."

In the author's absence, the secretary read the paper by Dr. John R. Haynes, Los Angeles, Cal., "Duty of Railroads in Transportation and Care of Tuberculous Passengers."

Dr. Clarence L. Wheaton, Chicago, read his paper, "Value of the Sanatorium in the Crusade Against Tuberculosis."

In the author's absence and by his request, Dr. A. S. Taussig, Denver, read his paper by Dr. William N. Beggs, Denver, "Some Ways to Prevent the Spread of Tuberculosis."

Dr. S. A. Knopf, New York, read his paper, "A Plea for Cremation in Tuberculosis and Similarly Infectious Diseases."

In the ensuing discussion the following participated: Drs. C. S. Williamson, Chicago; Lobin, Wilmington, Del.; C. C. Browning, Los Angeles, Cal., the last-named member presenting the following resolution, which was adopted:

"*Resolved*, That the American Medical Association's Section on Hygiene and Sanitary Science appoint through its chairman, a committee of three, which shall report at the next session a form of ordinance which may be recommended to municipalities as suitable for adoption for the prevention of the spread of tuberculosis."

The Chairman appointed the following committee: Drs. C. C. Browning, Los Angeles, Clarence L. Wheaton, Chicago, S. A. Knopf, New York.

The discussion was then continued by Drs. P. H. Ballhache, New York; J. Pitta, New Bedford, Mass.; F. A. Tucker, Noblesville, Ind.

"Venereal Diseases in Children," was the next paper, by Dr. Alfred C. Cotton, Chicago.

The Chairman appointed a nominating committee, consisting of: Drs. Liston H. Montgomery, Chicago; Gardner T. Swarts, Providence, R. I.; W. F. Morrison, Spokane, Wash.; and C. E. Woodruff, U. S. Army.

The discussion of the morning's papers, as read before the Section, was continued by Drs. Liston H. Montgomery, Chicago; J. T. Searcy, Tuscaloosa, Ala.; H. S. Pomeroy, Boston; S. A. Knopf, New York; G. Walter Holden, Denver; Clarence L. Wheaton, Chicago.

On motion of Dr. G. Walter Holden, Denver, seconded by Dr. Clarence L. Wheaton, Chicago, the Section referred the question of forming a department on tuberculosis in THE JOURNAL of the American Medical Association, to the House of Delegates, and urged that such a department be organized.

On motion of Dr. Liston H. Montgomery, Chicago, seconded by Dr. S. A. Knopf, New York, unanimous consent was given to hear the report of the Nominating Committee, the vote thereon being deferred until 2 p. m.

The following were nominated: Chairman, Prince A. Morrow, New York. Secretary, Elmer E. Heg, Seattle, Wash. Delegate, Denslow Lewis, Chicago.

THURSDAY, JUNE 7—AFTERNOON.

On motion of Dr. A. D. Lake, Towanda, N. Y., properly seconded, the report of the Nominating Committee, after having been read again at this session, was adopted.

Dr. T. Alex. MacNicholl, New York, read his paper, "Effects of Alcohol on the Human System, Relating to Effect on School Children."

In substitution for paper of Dr. John Madden, Portland, Ore., a paper, "The Physiologic Action of Alcohol," was read by its author, Dr. Winfield S. Hall, Chicago.

Dr. Matthew Woods, Philadelphia, read his paper, "The Relation of Alcohol to Epilepsy."

Mrs. M. H. Allen, Oneida, N. Y., read her paper, "The Value of Temperance Instruction."

Dr. Charles E. Woodruff, U. S. Army, read his paper on "Limitation of Intemperance."

On motion of Dr. T. D. Crothers, Hartford, Conn., duly seconded, the Section tabled, for consideration at the close of the reading of the papers and of the discussion, the following resolution presented by Dr. Charles E. Woodruff, U. S. Army:

RESOLUTION ON THE ARMY CANTEEN.

WHEREAS, It has been proved that the sale of beer and light wines in the army canteen has been productive of good by reducing drunkenness and by eliminating the objectionable saloons surrounding Army posts, and

WHEREAS, Though it is undoubtedly objectionable to place alcoholic beverages for sale as to be convenient to young men, yet the restrictions on its sale in the army canteen not only render it comparatively harmless but so greatly reduce the evils now existing, as to leave no doubt as to its being infinitely preferable as the choice of two evils; therefore, be it

Resolved, By the Section on Hygiene and Sanitary Science of the American Medical Association, that the restoration of the sale of beer and light wines in the army canteen is highly desirable as an instrument for reducing drunkenness, disease and crime.

(Resolution tabled, see below.)

Dr. T. D. Crothers, Hartford, Conn., Dr. George F. Butler, Chicago, and Dr. L. D. Mason, Brooklyn, read their respective papers on the topic, "The Care of the Inebriate."

The following papers were then received on the subject of alcohol: Dr. T. H. Mays, Philadelphia, "Relating to Tuberculosis;" Dr. Eugene S. Talbot, Chicago, "Relating to Degeneracy"; Dr. Winfield S. Hall, Chicago, "Relating to the Value of Instruction Regarding Alcohol"; Dr. P. A. Lovering, U. S. Navy, "Limitation of Intemperance."

The participants in the discussion on all these papers were: Drs. T. D. Crothers, Hartford, Conn.; William Lee Howard, Baltimore; John Hunter, Toronto, Canada; Charles E. Woodruff, U. S. Army; T. Alex. MacNicholl, New York; William E. Harwood, Eveleth, Minn.

The Section then went into executive session, non-members retiring.

Dr. F. A. Tucker, Noblesville, Ind., presented, and Dr. T. D. Crothers, Hartford, Conn., seconded, the following resolutions, which were approved for submission to the House of Delegates (no action was taken by that body, however):

Resolved, That the protection of the public health is one of the chief duties of a government; and be it further

Resolved, That we unreservedly endorse the action of the United States Senate in passing the Beveridge bill, which provides for a more rigid inspection of meats than that which now exists, and for the maintenance of strict sanitary conditions in all packing houses engaged in foreign or interstate commerce; and be it further

Resolved, That in the Pure Food Bill now before the House, the Government is asserting its just authority to prevent the manufacture, sale or transportation of adulterated or deleterious foods and drugs, which bill does not, but should, cover all packing house products, which form so great a part of the food supply of the American people.

On motion of Dr. Winfield S. Hall, Chicago, seconded by Dr. George F. Butler, Chicago, the Section, by a rising vote, reconsidered and indefinitely tabled the "Resolution on the Army Canteen" (see above), presented by Dr. Charles E. Woodruff, U. S. Army, and later seconded by Dr. Laura E. C. Hughes, Boston, and in the same vote tabled the following, having been presented by Dr. T. Alex. MacNicholl, New York, and seconded by Drs. Winfield S. Hall, Chicago, and T. D. Crothers, Hartford, Conn.:

Resolved, In view of the fact that some of the most important provisions of the anti-canteen law have not been extensively enforced, that it be the sense of the Section on Hygiene and Sanitary Science, that before condemning the present law, we are in favor of its complete and thorough enforcement.

Dr. George F. Butler, Chicago, presented, and Dr. T. D. Crothers, Hartford, Conn., seconded, the following, which was approved for submission to the House of Delegates (no action recorded by that body):

"Whereas, It is generally believed by the medical profession that inebriety, or its more rabid form, dipsomania, is a disease and its prevalence is doing untold damage to the public and to our country; be it

"*Resolved*, That the Section on Hygiene and Sanitary Science of the American Medical Association urgently recommend the establishment of sanitaria or institutions by the various states for the care and treatment of inebriety and drug addiction."

Section on Ophthalmology.

TUESDAY, JUNE 5—AFTERNOON.

The meeting was called to order at 2 p. m. by the chairman, Dr. Lewis H. Taylor, Wilkesbarre, Pa., who delivered the chairman's address. Dr. Albert E. Bulson, Jr., Fort Wayne, Ind., was Secretary.

Dr. Charles H. Williams, Boston, read a paper on "A More Uniform Standard for the Illumination of Visual Test Types." Discussed by Drs. O. F. Wadsworth, Boston; Nelson M. Black, Milwaukee; George F. Keiper, Lafayette, Ind.; Myles Standish, Boston; H. V. Würdemann, Milwaukee; Lucien Howe, Buffalo, and Charles H. Williams, Boston.

Dr. Nelson M. Black, Milwaukee, read a paper on "A New Supplementary Test for Color Vision; the Semaphore Lamps Used in Railway Service Being the Source of Illumination." Discussed by Drs. Charles H. Williams, Boston; Mortimer Frank, Chicago; W. H. Parker, Detroit, and Nelson M. Black, Milwaukee.

Dr. George T. Stevens, New York, read a paper on "A New Phenomenon in Color Conversion." Discussed by Drs. Charles H. Williams, Boston; Nelson M. Black, Milwaukee; F. H. Verhoeff, Boston; Edward Jackson, Denver; Myles Standish, Boston, and George T. Stevens, New York.

Dr. E. C. Ellett, Memphis, Tenn., read a paper on "Dendritic Keratitis of Malarial Origin." Discussed by Drs. E. C. Ellett, Memphis; C. J. Kipp, Newark, N. J.; H. Moulton, Ft. Smith, Ark.; George F. Keiper, Lafayette, Ind.; John Green, Jr., St. Louis; Leartus Connor, Detroit; Edward Jackson, Denver; S. D. Risley, Philadelphia, and W. H. Merrill, Lawrence.

Dr. A. A. Hubbell, Buffalo, read a paper on "Uniocular Inflammation of the Optic Nerve and Retina." Discussed by Eugene Smith, Detroit; T. Herron, Jackson, Tenn.; J. A. Patterson, Colorado Springs; Wendell Reber, Philadelphia; A. R. Baker, Cleveland; C. J. Kipp, Newark, N. J.; E. E. Holt, Portland, Maine; S. D. Risley, Philadelphia; William H. Wilder, Chicago; George E. de Schweinitz, Philadelphia; Nelson M. Black, Denver, and A. A. Hubbell, Buffalo.

Dr. C. J. Kipp, Newark, N. J., read a paper on "Retrobulbar Neuritis Following Childbirth." Discussed by Drs. George S. Derby, Boston; Nelson M. Black, Milwaukee, and C. J. Kipp, Newark, N. J.

The Committee on Portraits of Deceased Members reported the result of their work, a collection of 400 portraits, of which 250 had been selected for exhibit.

WEDNESDAY, JUNE 6—MORNING.

Dr. George S. Derby, Boston, read a paper on "Bacteriology of the Eyelids."

Dr. Edward A. Shumway, Philadelphia, read a paper on "The Pathogenic Bacteria of the Conjunctiva."

Dr. John E. Weeks, New York, read a paper on "The Pathogenic and Physiologic Bacteria of the Eyeball."

Dr. Brown Pusey, Chicago, read a paper on "The Diplobacillus of Morax-Axenfeld."

These four papers were discussed by Drs. Robert L. Randolph, Baltimore; E. E. L. Brown, Chicago; William Campbell Posey, Philadelphia; George S. Derby, Boston; Edward Jackson, Denver; C. D. Westcott, Chicago; George E. de Schweinitz, Philadelphia; C. W. Hawley, Chicago; William M. Sweet, Philadelphia; Charles H. Williams, Boston; Nelson M. Black, Milwaukee; E. V. L. Brown, Chicago; Edward A. Shumway, Philadelphia, and John E. Weeks, New York.

Dr. Edgar S. Thompson, New York, read a paper on "The Staining and Examination of the Bacteria of the Eye by Simple, Practical Methods." Discussed by Drs. Brown Pusey, Chicago; Arnold Knapp, New York; George S. Dixon, New York; John E. Weeks, New York; E. L. Melerhof, New York; Luedde, St. Louis; Brown Pusey, Chicago, and Edgar S. Thompson, New York.

Dr. E. E. Holt, Portland, Maine, read a paper on "Physical Economics." Discussed by Drs. H. V. Würdemann, Milwaukee; L. W. Fox, Philadelphia, and Edward Jackson, Denver.

Dr. William Zentmayer, Philadelphia, read a paper on "Some Unusual Ocular Manifestations of Arteriosclerosis." Discussed by Dr. D. J. McCarthy, Philadelphia.

WEDNESDAY, JUNE 6—AFTERNOON.

Dr. Casey A. Wood, Chicago, presented "A Demonstration of the Fundi of Some Birds, with Remarks on Their Eyes and Eyesight."

Dr. Edward Jackson, Denver, read a paper on "Relations of the Superior and Inferior Oblique Recti Muscles to Recti Muscles in Squint." Discussed by Drs. Francis Valk, New York; M. D. Stevenson, Akron, Ohio; Frank Todd, Minneapolis; John E. Weeks, New York; Myles Standish, Boston, and Edward Jackson Denver.

Dr. Wendell Reber, Philadelphia, read a paper on "A Study of Conservative Eye Defects, Including Its Analysis of 441 Cases of Exophoria." Discussed by Drs. Edward Jackson, Denver; Alex. Duane, New York; M. D. Stevenson, Akron, Ohio; G. C. Savage, Nashville; Oscar Wilkinson, Washington, D. C., and Wendell Reber, Philadelphia.

Dr. G. C. Savage, Nashville, read a paper on "Some Axioms Concerning Ocular Rotations." Discussed by Drs. George H. Price, Nashville; M. D. Stevenson, Akron, Ohio; F. H. Verhoeff, Boston; Lucien Howe, Buffalo, and G. C. Savage, Nashville.

Dr. Alex. Duane, New York, read a paper on "Ophthalmic Practice of the Present Time." Discussed by Drs. A. E. Prince, Springfield; Oscar Wilkinson, Washington; George M. Gould, Philadelphia; Leartus Connor, Detroit; G. C. Savage, Nashville, and Francis Valk, New York.

Dr. J. H. Claiborne, New York, read a paper on "Conjugate Lateral Deviations." Discussed by Drs. M. D. Stevenson, Akron, Ohio; William Zentmayer, Philadelphia, and Alex. Duane, New York.

Dr. George M. Gould, Philadelphia, read a paper on "Incurable Eyestrain." Discussed by Drs. Peter A. Callan, New York, and George M. Gould, Philadelphia.

THURSDAY, JUNE 7—MORNING.

Dr. W. Franklin Coleman, Chicago, read a paper on "Some Personal Experiences in the Use of Electricity in Ophthalmic Practice." Discussed by Drs. S. Lewis Ziegler, Philadelphia; Leartus Connor, Detroit; Lucien Howe, Buffalo; H. V. Würdemann, Milwaukee; Charles H. Williams, Boston; E. J. Brown, Chicago; George F. Keiper, Lafayette, Ind., and W. F. Coleman, Chicago.

Dr. G. Oram Ring, Philadelphia, read a paper on "The X-Ray in Ocular Therapeutics." Discussed by Drs. George S. Dixon, New York; W. F. Coleman, Chicago; C. S. Bull, New York; John E. Weeks, New York; Edward Jackson, Denver; A. R. Baker, Cleveland; John Green, Jr., St. Louis; Casey A. Wood, Chicago; C. D. Wescott, Chicago; W. B. Marple, New York; William Sweet, Philadelphia; F. W. Fox, Philadelphia; C. L. Leonard, Philadelphia; C. L. Edsall, Philadelphia, and G. O. Ring, Philadelphia.

Dr. William M. Sweet, Philadelphia, read a paper on "Ocular Injuries from Foreign Bodies, with a Report of 420 Cases." Discussed by Drs. Howard F. Hansell, Philadelphia; W. F. Coleman, Chicago; Frank Todd, Minneapolis; S. D. Risley, Philadelphia; William H. Wilder, Chicago; Edward Jackson, Denver; T. J. McCoy, Los Angeles, and William M. Sweet, Philadelphia.

Dr. George E. de Schweinitz, Philadelphia, read a paper on "Autointoxication in Relation to the Eye." Discussed by Drs. Casey A. Wood, Chicago; Charles S. Bull, New York; W. B. Marple, New York; William C. Posey, Philadelphia; William Zentmayer, Philadelphia; John E. Weeks, New York; F. S. de Lue, Boston; S. D. Risley, Philadelphia; Edward Jackson, Denver; John Green, Jr., St. Louis, and George E. de Schweinitz, Philadelphia.

Dr. Robert L. Randolph, Baltimore, read a paper on "The Eye Injuries of Independence Day; A Further Contribution to the Subject." Discussed by Drs. G. C. Savage, Nashville, and Lucien Howe, Buffalo.

Dr. W. B. Marple, New York, read a paper on "Injuries of the Eye with Bird Shot." Discussed by Drs. George E. de Schweinitz, Philadelphia; H. V. Würdemann, Milwaukee; Edward Jackson, Denver; Robert L. Randolph, Baltimore; S. D. Risley, Philadelphia; R. D. Gibson, Youngstown, Ohio; Charles H. Beard, Chicago; William M. Sweet, Philadelphia, and W. B. Marple, New York.

THURSDAY, JUNE 7—AFTERNOON.

The Executive Committee, by Dr. John E. Weeks, New York, Chairman, reported the following nominations for officers for the ensuing year: Chairman, Dr. G. C. Savage, Nashville; vice-chairman, Dr. A. A. Hubbell, Buffalo; secretary, Dr. A. E. Bulson, Jr., Fort Wayne, Ind.; delegate, Dr. S. D. Risley, Philadelphia.

Unanimous consent being given, the chairman (in the absence of the secretary) cast the ballot for the election of the above-nominated officers.

The Executive Committee, reporting on the plan of presentation of papers as followed at this session, preferred to make no recommendations, but briefly explained the method and left its adoption or rejection to the society.

Dr. Edward Jackson, Denver, offered a resolution as follows:

Resolved, That it is the sense of the Section that the plan of printing papers for distribution before the session should be continued for the coming year, which resolution was unanimously adopted.

The Executive Committee recommended the adoption of a rule that all papers to be presented must be in the hands of the Secretary eight weeks before the session of the Association, which was adopted by the Section.

Dr. Lucien Howe, Buffalo, offered the following resolutions, and moved that they be adopted. The motion was seconded by Dr. E. S. Holt, Portland, Maine:

WHEREAS, It is a well-established fact that when making tests of the strength of the extraocular muscles, if the examiner selects different prisms from the test case, or when using prisms in series, or revolving prisms, if he begins with those which the patient *can* not overcome, and gradually *decreases* the strength of the prism which the patient can overcome, then one set of results is obtained. But, on the other hand, when using prisms in series or revolving prisms, if the examiner begins with those which the patient *can* overcome, and gradually *increases* the strength of the prisms, then the one found necessary to produce diplopia is decidedly stronger than by the former method; and,

WHEREAS, When the former method is adopted the results are much more constant and exact than by the latter method; and,

WHEREAS, No matter in what way the measurements have been made, when the result is recorded in the strength of the prism, which can be overcome, some practitioners count that as if a prism were held before each eye, and others as if one prism of twice the strength were held before one eye only; and,

WHEREAS, These differences in methods of using prisms and of recording the results of tests, have given rise to different estimates of the strength of the extraocular muscles, with corresponding confusion of our ideas on the subject; and,

WHEREAS, One of the prime objects of a national medical association is to make our methods and records more uniform, and, therefore, more intelligible to ourselves and to each other; therefore, be it

Resolved, That it is the sense of the Section on Ophthalmology of the American Medical Association, that hereafter, when any member describes the strength of the extraocular muscles, it is to be understood, unless specified to the contrary, that in making these measurements the examiner has used prisms selected from the ordinary test case, or if he did use prisms in series or revolving prisms, in doing so he commenced the measurements with prisms which were sufficiently strong to produce a well-marked diplopia, and then *decreased* the strength of the prisms until one was found which could be overcome by the patient; and,

Resolved, That in recording the strength of the prism which can be overcome by any such tests, it is to be understood, unless specified to the contrary, that the number given is to express the total fusion power, that is, the strength of the one prism which is required to produce the result, and not half the fusion power, as when a prism of half that strength is held before each eye.

Dr. Edward Jackson, Denver, offered an amendment to Dr. Howe's motion, providing that the resolutions be referred to a special committee of three, with instructions to report on the matter at the next annual session, which amendment was accepted by Dr. Howe, and the motion as amended was carried.

Dr. A. A. Hubbell, Buffalo, offered the following resolution proposed by Dr. F. Park Lewis:

WHEREAS, Nothwithstanding the long-continued efforts of the medical profession to make generally known the infectious character of ophthalmia neonatorum and its danger to sight, the ranks of the blind are still largely increased annually by those who have unnecessarily lost their vision as a result of this disease; and

WHEREAS, We possess in the silver salts an almost absolute specific for its prevention and treatment.

Resolved, That this Section recommend that a committee be appointed, consisting of at least one ophthalmologist, one obstetrician and one sanitarian, with the invited co-operation of a subcommittee, consisting of the president and secretary of each state association, to formulate and make effective the details of a plan that may give uniform legislation and definite instruction to the profession and laity concerning the prevention and treatment of this disease.

Resolved, That this Section recommend an ophthalmologist for such committee, to be appointed by the incoming chairman and Executive Committee.

The resolution was adopted and referred to the House of Delegates, who approved them (see THE JOURNAL, June 16, page 1877).

The following resolution, offered by Dr. Nelson M. Black, Milwaukee, was adopted by the Section:

Resolved, That a committee of three be appointed by the chairman to determine on a standard of illumination for test-type charts to be expressed in candle-power units, or some standard used for measurement of light, and that the committee report at the next session of the Section.

Dr. Charles H. Beard, Chicago, presented an "Exhibition, by Means of the New Opaque Projector, of Original Colored Ophthalmoscopic Drawings."

Dr. Frank C. Todd, Minneapolis, read a paper on "The Ripening Operation for Immature Senile Cataract; Its Place."

Dr. Mark D. Stevenson, Akron, Ohio, read a paper on "Some Important Considerations in the Extraction of Cataract."

Dr. F. H. Verhoeff, Boston, read a paper on "Cataract Extraction with Modified Iridotomy."

Dr. Melville Black, Denver, read a paper on "The Use of the Secondary Cataract Knife."

These four papers were discussed by Drs. M. Wiener, St. Louis; A. E. Bulson, Jr., Fort Wayne, Ind.; Allen Greenwood, Boston; Casey A. Wood, Chicago; F. W. Fox, Philadelphia; Oscar Wilkinson, Washington; Wendell Reber, Philadelphia; S. L. Ledbetter, Birmingham, Ala.; S. L. Ziegler, Philadelphia; A. R. Baker, Cleveland; C. W. Hawley, Chicago; W. B. Marple, New York; E. E. Jack, Boston; W. H. Parker, Detroit; R. D. Gibson, Youngstown, Ohio; T. J. McCoy, Los Angeles; E. E. Holt, Portland, Maine.

Dr. William Campbell Posey, Philadelphia, read a paper on "The Value of Myotics in the Treatment of Chronic Simple Glaucoma." Discussed by Drs. John E. Weeks, New York; Charles S. Bull, New York; George E. de Schweinitz, Philadelphia; W. H. Wilder, Chicago; Peter Callan, New York, and William C. Posey, Philadelphia.

FRIDAY, JUNE 8—MORNING.

Dr. E. V. L. Brown, Chicago, read a paper on "So-Called Leucosarcoma of the Iris." Discussed by Drs. F. H. Verhoeff, Boston; H. V. Würdemann, Milwaukee, and E. V. L. Brown, Chicago.

Dr. H. V. Würdemann, Milwaukee, read a paper on "The Differential Diagnosis and Prognosis of Tumors of the Uveal Tract." Discussed by Drs. Charles S. Bull, New York; William Thompson, Philadelphia; Edward Shumway, Philadelphia; Charles H. Williams, Boston; O. F. Wadsworth, Boston; R. D. Gibson, Youngstown, Ohio, and H. V. Würdemann, Milwaukee.

Dr. Charles S. Bull, New York, read a paper on "The Treatment of Progressive Atrophy of the Optic Nerve, Due to Acquired Syphilis, by Subconjunctival and Intravaginal Injections of Sublimate of Mercury." Discussed by Drs. S. D. Risley, Philadelphia; A. A. Hubbell, Buffalo; George E. de Schweinitz, Philadelphia, and Charles S. Bull, New York.

Dr. William H. Wilder, Chicago, read a paper on "Paraffin Plates as an Aid in Operations for Extensive Symblepharon and the Restoration of Material for Prothesis." Discussed by Drs. Charles H. May, New York; C. W. Hawley, Chicago; John E. Weeks, New York; S. D. Risley, Philadelphia; C. D. Wescott, Chicago, and William H. Wilder, Chicago.

Dr. Frank E. Brawley, Chicago, read a paper on "The Relation of Diseases of Nasal Accessory Sinuses to Diseases of the Eyes." Discussed by Drs. Nelson M. Black, Milwaukee, and S. L. Ledbetter, Birmingham, Ala.

Dr. Nelson M. Black, Milwaukee, exhibited a number of pieces of colored glass, such as those used in railroad signaling, showing the different quality of transmissibility and spectroscopic properties.

Dr. S. D. Risley, Philadelphia, exhibited a spectacle frame devised by him for the holding of prisms and practicing of adduction exercises.

The chairman announced the appointment of the committee on Dr. Howe's resolution; Dr. Lucien Howe, Buffalo; Dr. Edward Jackson, Denver, and Dr. Alexander Duane, New York. Also the committee on resolution of Dr. Black: Dr. Nelson M. Black, Milwaukee; Dr. Charles H. Williams, Boston, and Dr. M. D. Stevenson, Akron, Ohio.

Dr. Leartus Connor, Detroit, offered the following resolution, which was adopted:

Resolved, That the thanks of the Section on Ophthalmology of the American Medical Association be given all who have contributed to the profit and pleasure of our session, especially (1) to Dr. Myles Standish and his associates for untiring courtesies; (2) to the Massachusetts Charitable Eye and Ear Hospital for the typical New England seaside lunches served us in the hospital and a glimpse of the workings of the Institution; (3) to President Taylor, Secretary Bulson and our Executive Committee for their indefatigable efforts in making our session the best possible; (4) to the Harvard Medical School and other institutions that have added to our comfort and convenience; (5) and to the general management which sympathetically co-operated in making possible the novel features of this session.

Section on Diseases of Children.

TUESDAY, JUNE 5—AFTERNOON.

Meeting called to order at 2:15, by the Chairman, Dr. W. C. Hollopeter, of Philadelphia; Dr. W. J. Butler, Chicago, being Secretary.

The "Address of Welcome" was given by Dr. Thomas Morgan Rotch, Boston.

Dr. W. C. Hollopeter, Philadelphia, delivered the Chairman's address, entitled "The Pediatric Outlook."

Dr. B. Sachs, New York City, read a paper on "Injuries to the Child's Head During Labor." The paper was discussed by Drs. Effie Davis, of Chicago; C. G. Kerley, New York City; R. B. Gilbert, Louisville, Ky.; J. C. Cook, Chicago, and Dr. Sachs.

Dr. C. F. Wahrer, Fort Madison, Iowa, read a paper entitled "Heredity and Environment as Factors in the Life and Diseases of Children," which was discussed by Dr. F. A. Rhoades, Pittsburg; D. S. Hansell, Cleveland, Ohio; Gilbert, Louisville; G. E. Robbins, Ohio; J. W. Kyger, Kansas City, Mo., M. E. Dunning, New York City, and Dr. Wahrer.

Dr. H. McClanahan, Omaha, contributed a paper on "Hemorrhage in the New Born." This was discussed by Drs. A. Garcelon, Maine; I. A. Abt, Chicago; Litzenberg, Minneapolis; Melinda Germann, Quincy, Ill.; Effie Davis, Chicago, and Dr. McClanahan.

A paper entitled "The Value of Blood Cultures in the Diagnosis of Acute Infectious Diseases in Children" was read by Dr. Thomas Morgan Rotch, Boston. Discussed by Dr. E. E. Graham, Philadelphia and Dr. Rotch.

Dr. J. Madison Taylor, Philadelphia, read a paper on "Fever and the Place of Salines in Treatment." Discussed by Dr. H. C. Worthington, Illinois.

A volunteer paper sent to Dr. A. C. Cotton, Chicago, on "A Case of Meningitis with Isolation of the Bacillus Diphtheriæ from Cerebrospinal Fluid," was read by Dr. Cotton. The case occurred in the service of Dr. Walls, in the Cook County Hospital.

WEDNESDAY, JUNE 6—MORNING.

Dr. J. C. Cook, Chicago, read a paper on "Bacteriologic and Blood Findings in Thirty-six Cases of Bowel Infection in Infants." Discussed by Drs. J. L. Morse and A. H. Wentworth, Boston, and Dr. Cook.

A paper entitled "A Further Contribution to the Study of the Stools in Starch-fed Infants," contributed by Drs. C. G. Kerley and H. N. Mason, New York City, was read by Dr. Kerley. The paper was discussed by Drs. Samuel Amberg, Baltimore; G. R. Pisek, Thomas W. Southworth and T. W. Kilmer, New York City; A. H. Wentworth, Boston; J. B. Learned, Northampton, Mass.; B. B. Simms, Talladega, Ala., and Dr. Kerley.

Dr. A. C. Cotton, Chicago, read a paper on "Sodium Citrate in Infant Feeding."

On motion it was seconded and carried that the paper by Dr. Cotton and the papers following, entitled, "The Trend of Pediatric Opinion Concerning the Artificial Feeding of Infants," by Dr. Thomas S. Southworth, New York City, and "Whole Milk vs. Laboratory Feeding," by Dr. A. McAlister, Camden, N. J., be discussed jointly. After the reading of the papers by the respective authors this was done. Those taking part in the discussion were: Drs. D. E. English, Mill Burn, N. J.; J. L. Morse, Boston; C. G. Kerley, New York City; R. B. Gilbert, Louisville; T. W. Kilmer, New York City; Effie Davis, Chicago; A. H. Wentworth, Boston; J. W. Vanderslice, Chicago; F. Wahrer, Fort Madison, Iowa; Samuel Amberg, Baltimore; W. C. Brewer, Miss.; M. G. Campbell, Atlanta; G. R. Pisek, New York City, and Drs. Cotton, Southworth and McAlister.

WEDNESDAY, JUNE 6—AFTERNOON.

"The Use of Sodium Citrate as a Modifier of Cow's Milk from a Chemical and Physical Point of View" was the title of a paper read by Dr. Joseph W. England, Philadelphia.

Dr. E. E. Graham, Philadelphia, read a paper on "Diagnosis of Tuberculosis in Infants and Children." The paper was discussed by Drs. W. P. Northrup, New York; J. W. Vanderslice, Chicago; Arthur W. Fairbanks, Boston; C. G. Kerley, New York; T. J. Eiterich, Pittsburg; William J. Butler, Chicago, and Dr. Graham.

Dr. W. P. Northrup, New York City, read a paper on "The Open Air Treatment of Pneumonia." This was discussed by Drs. J. L. Morse, Boston; I. A. Abt, Chicago; E. E. Graham, Philadelphia; C. F. Wahrer, Fort Madison, Iowa; W. C. Brewer, Miss.; F. S. Churchill, Chicago; H. McClanahan, Omaha; George N. Acker, Washington, D. C.; A. C. Cotton, Chicago; D. E. English, Mill Burn, N. J.; H. C. Worthington, Chicago; R. B. Gilbert, Louisville; B. B. Simms, Talladega, Ala.; and Dr. Northrup.

Dr. J. L. Morse, Boston, read a paper entitled "An Analysis of Forty Cases of Meningitis in Children." The paper was discussed by Drs. F. S. Churchill, Chicago; W. P. Northrup, New York; C. G. Kerley, New York; Arthur W. Fairbanks, Boston; E. E. Graham, Philadelphia; William J. Butler, Chicago, and Dr. Morse.

Dr. Arthur W. Fairbanks, of Boston, read a paper on "Cerebral Syphilis in Childhood." The paper was discussed by Drs. W. P. Northrup, New York, and William J. Butler, Chicago.

"Tetanus Neonatorum; A Statistical Study." This paper was presented by Dr. James M. Anders and Dr. Arthur C. Morgan, Philadelphia. The paper was discussed by Dr. R. B. Gilbert, Louisville; W. T. Watson, Baltimore, and Dr. Anders.

Dr. W. E. Darnall, Atlantic City, read a paper on "Neuroma and Neurofibroma."

THURSDAY, JUNE 7—MORNING.

Dr. I. A. Abt, Chicago, read a paper on "Acute Encephalitis." It was discussed by Drs. J. Ross Snyder, Birmingham, Ala.; William J. Butler, Chicago; George N. Acker, Washington, D. C.; M. L. Rhein, Philadelphia; H. Lowenburg, Philadelphia, and Dr. Abt.

Dr. J. Herbert Claiborne, New York City, read a paper entitled "Concerning Types of Congenital Symbol Amblyopia." Discussed by Drs. T. W. Kilmer, New York City; M. L. Rhein, Philadelphia, and Dr. Claiborne.

Dr. Daniel R. Brown, Salem, Mass., read a paper on "Accurate Modification of Milk, Simple and Practicable."

Dr. C. Townsend, of Boston, read a paper on "Simplicity in Infant Feeding."

Dr. C. W. M. Brown, Elmira, N. Y., presented a paper on "Certified Milk in Small Cities."

Dr. H. Lowenburg, Philadelphia, read a paper entitled "Why Percentage Feeding Fails—A Plea for Its More Frequent Adoption by the General Practitioner."

These four papers were discussed by Drs. C. F. Wahrer, Fort Madison, Iowa; S. M. Hamill, Philadelphia; J. W. Kyger, Kansas City, Mo.; W. G. Murphy, Hartford, Conn.; Melinda Germann, Quincy, Ill.; Robert W. Hastings, Boston; C. G. Kerley, New York City; S. M. Hamill, Philadelphia; Thomas Morgan Rotch, Boston, and Drs. Brown, Townsend, Brown and Lowenburg.

THURSDAY, JUNE 7—AFTERNOON.

The Executive Committee recommended the following for officers: Chairman, Dr. J. Ross Snyder, Birmingham, Ala.; secretary, Dr. A. H. Wentworth, Boston; delegate, Dr. Thomas S. Southworth, New York City.

It was moved, seconded and carried that the report be adopted.

The report of the Committee on Pediatric Teaching in the Medical Schools in the United States was read by the chairman, Dr. J. Ross Snyder. It was moved, seconded and carried that the report be accepted and placed on file.

Dr. H. McClanahan, Omaha, offered a resolution that the reports from the 93 medical schools mentioned in the report of the Committee on Pediatric Teaching in the Medical Schools in the United States be filed for reference with the secretary of the Section; that the secretary as nearly as possible complete these reports; and, that as the Section deems advisable, the secretary be instructed to further address the medical schools of the country for information concerning the teaching of pediatrics in their institutions.

Dr. J. C. Cook, Chicago, moved that the resolution offered by Dr. McClanahan be accepted and placed on file in connection with the report of the committee. Seconded and carried.

Dr. Melinda Germann, Quincy, Ill., read a paper entitled "Pleuritic Exudate in Children." This was discussed by Drs. J. L. Morse, Boston; T. W. Kilmer, New York City; Thomas S. Southworth, New York City; William J. Butler, Chicago; J. L. Morse, Boston; T. W. Kilmer, New York City, and Dr. Germann.

Dr. J. Ross Snyder read a paper entitled "Rheumatism in Children."

Dr. Charles Hunter Dunn, Boston, read a paper on "The Clinical Aspects of Rheumatic Fever in Childhood and Their Significance in the Question of Specific Etiology."

These two papers were discussed by Drs. S. M. Hamill, Philadelphia; I. A. Abt, Chicago; R. L. Glendenning, Manchester, Mass.; Arthur W. Fairbanks, Boston; William J. Butler, Chicago, and Drs. Snyder and Dunn.

Section on Stomatology.

TUESDAY, JUNE 5—AFTERNOON.

The meeting was called to order at 2:30 p. m. in Tufts Medical College.

On account of the death of Dr. Charles Allen and the inability of Dr. H. P. Carlton, San Francisco, to be present, it was necessary to elect a chairman. Dr. R. R. Andrews was elected chairman.

The secretary read the following names as eligible for membership: Drs. L. D. Shepard, 330 Dartmouth Street, Boston; G. E. Savage, Worcester, Mass.; A. J. Flanagan, Springfield, Mass.; Waldo E. Boardman, 184 Boylston Street, Boston; James E. Power, Providence, R. I.; R. H. Richter, 128 Wisconsin Street, Milwaukee, Wis.; M. C. Smith, Lynn, Mass.; Charles C. Potter, 16 Arlington Street, Boston; Frank T. Taylor, 419 Boylston Street, Boston; R. Gelkey Horne, Watertown, Mass.; Estes, Newport, R. I.; Edgar O. Kinsman, Cambridge, Mass.; Carl R. Lindstrom, Boston; F. Messenger, Brooklyn, N. Y.; C. W. Rodgers, Dorchester, Mass.; Isidore Lett, Boston; Eugene Smith, Boston. All were duly elected to membership.

The secretary, Dr. Eugene S. Talbot, Chicago, said: "We are fortunate that at this time the Massachusetts Dental Association is in session, and the officers of the Association and those of the Section on Stomatology were anxious to have the members of the association meet with the Section this year; therefore, as secretary, I extend a cordial invitation to members of the Massachusetts Dental Society to meet with us this year."

The next business was the adoption of the program. On motion, duly seconded, it was unanimously adopted.

The first paper read was by Dr. M. H. Fletcher, Cincinnati, entitled: "What Is Effect on Progeny of Loss of Teeth in Ancestry?" Discussed by Drs. Talbot and Rhein.

Dr. Charles Hunter Dunn read a paper on "Reflexes of Dentition from the Physician's Standpoint." Discussed by Drs. Thomas M. Rotch, Boston; Cotton, Latham, Fletcher, Rhein, Brown and Schamberg.

Dr. Samuel H. Hopkins, Boston, read a paper entitled "Medical Phases of Dental Disorders," which was discussed by Drs. Rotch, Schamberg and Steeves.

Dr. James E. Power, Providence, R. I., read a paper entitled "The Relation of Systemic Diseases to the Conditions of the Oral Cavity," which was discussed by Drs. Hopkins, Latham, Schamberg and Power.

Dr. Alice M. Steeves, Boston, read a paper entitled "Two Cases of Infantile Scurvy," which was discussed by Drs. Rhein and Steeves.

The chairman appointed Drs. Fletcher, Latham and Steeves as nominating committee.

WEDNESDAY, JUNE 6—AFTERNOON.

The first paper read was entitled "Structure of the Jaws of Lower Vertebrates," by Dr. J. S. Kingsley, Boston.

Professor Minot, Boston, followed with remarks on "Development of the Human Jaw." Discussed by Drs. Talbot, Fletcher and Andrews.

Dr. G. V. I. Brown, Milwaukee, Wis., followed with a paper entitled "Conservatism in the Treatment of Infants with Harelip and Cleft Palate." Discussed by Drs. Fillebrown, Schamberg, Talbot and Brown.

Dr. Thomas Fillebrown, Boston, read a paper entitled "Conservative Surgery of the Lip." Discussed by Drs. Brown, Fletcher and Fillebrown.

THURSDAY, JUNE 7—AFTERNOON.

The first business in order was the election of officers. The following were nominated and duly elected: Chairman, Dr. M. I. Schamberg, Philadelphia; vice-chairman, Dr. E. W. Branigan, Boston; secretary, Dr. Eugene S. Talbot, Chicago; delegate, Dr. G. V. I. Brown, Milwaukee, Wis.

Dr. M. L. Rhein, New York, read a paper entitled "Treatment of Loosened Teeth."

Dr. Eugene S. Talbot, Chicago, followed with a paper entitled "Interstitial Gingivitis Produced by Autointoxication as Indicated by the Urine and Blood Pressure." These two papers were discussed by Drs. Schamberg, Fletcher, Brown, Rhein and Latham.

Dr. V. A. Latham, Chicago, read a paper on "Some Pathologic Features of the Pulp." Discussed by Drs. Fletcher, Schamberg, Talbot and Latham.

Dr. Andrews: I wish to call attention to the fact that we have lost two of our most valued members. Dr. Charles Allen, who was to have presided over this session, died some few months ago, and a few weeks ago Dr. Williams of this city, one of the original seven who formed this Section, passed away. Resolutions on the death of Dr. Allen and Dr. Williams have been prepared, and Dr. Eames, the chairman of the committee, will please read the resolutions.

Dr. Brown: Before the resolutions are read I would like to call the attention of the members to the fact that Dr. Charles Chick-

ering has passed away. He is a distinct loss to the profession, and I move that his name be added to the list. Motion seconded and passed.

Dr. Andrews: I name Dr. Brown as a committee to present a resolution on the death of Dr. Chickering.

The resolutions were presented as follows and adopted:

Dr. Jacob L. Williams, Boston, who died recently at his home on Walnut Street, was one of the seven original members who organized the Section of Stomatology of the American Medical Association at Richmond, Va., in 1881. He was always an active and enthusiastic member of the Section, rarely missing a session. At Nashville, Tenn., in 1890, he was chairman of the Section, and during his membership he was the contributor of many able scientific papers to the Section.

Your committee would therefore offer the following resolutions of respect:

WHEREAS, The Section on Stomatology hears with the deepest sorrow and regret of the death of our friend and professional brother, Dr. Jacob L. Williams, Boston, after a long life of useful and earnest labor for his profession and for humanity; therefore, be it

Resolved, That we appreciate to the utmost the earnest, conscientious services of his life work, and remember with admiration his ability and his candid generous action in all matters pertaining to professional thought and investigation.

Resolved, That the services rendered during a long and busy career will cause his name to be remembered as one who occupied a distinguished place within the ranks of his profession, and one whom it is a delight to remember and to honor.

Resolved, That our heartfelt sympathy is hereby tendered to his family, his relations and to his friends; and we wish to express our deep sense of loss in the death of one of our members who has been so long associated with our Section and its interests.

E. R. ANDREWS, Chairman.

WHEREAS, In the mysterious dealings of an All-Wise Providence, our friend and fellow-member, Dr. Charles Frederick Allen, Newburgh, N. Y., has been taken from us, in the midst of an active professional career; therefore, be it

Resolved, That in the death of Dr. Allen this Section has sustained the loss of a presiding officer who promised much in the interests of this Section and for the welfare of the whole profession.

Resolved, That although his membership in this Association had been of short duration, his upright character and genial friendliness, his professional ability as shown both in operative demonstrations and his writings, his wide knowledge of men and affairs have been deeply impressed on us; and be it further

Resolved, That we appreciate his allegiance to his country, which he served during the War of the Rebellion, his loyalty to his professional brethren and faithfulness to his patients, ever seeking the best methods, and never sparing expense or effort, that the best service might be rendered.

Resolved, That in the death of Dr. Allen we mourn the loss of a good friend and faithful practitioner, that we miss the genial smile and friendly hand clasp that revealed a loyal and generous heart. We sincerely mourn with our late brother's relatives and family and extend to them our sincere sympathy.

GEORGE F. EAMES, Chairman.

Dr. Fletcher: I move that these resolutions be sent to the families of the deceased members and that they be prepared for publication. Seconded and carried.

Dr. M. I. Schamberg, Philadelphia, was then introduced as the chairman for the coming year and expressed his gratitude for the honor bestowed on him. He said further: "I hope to fill the office to the best of my ability and I trust that those who have been so active in the past in furthering the interest of this Section will lend their aid during the coming year as they have in the past. Dr. Talbot, I believe, deserves all the credit for the progress that this Section has made. I feel that both the oral profession and the dental profession are greatly indebted to Dr. Talbot for his work in bringing this Section to such a successful issue during the years in which he has been secretary and in furthering the advancement of those subjects which are so closely related to both medicine and dentistry."

Section on Nervous and Mental Diseases.

TUESDAY, JUNE 5—AFTERNOON.

The meeting was called to order at 5 p. m. in Natural History Building, by the chairman, Dr. Wharton Sinkler, Philadelphia. The secretary was Dr. T. H. Weisenburg, Philadelphia.

The chairman's address was read by Dr. Wharton Sinkler, Philadelphia.

WEDNESDAY, JUNE 6—MORNING.

The meeting was called to order at 9:30 a. m. in the New Harvard Medical School by the chairman.

"Manic-Depressive Insanity and Visceral Disorder" was read by Dr. Henry R. Upson, Cleveland, Ohio, and discussed by Drs. W. H. Humiston, Cleveland; Francis X. Dercum and Alfred Gordon, Philadelphia, and Dr. Upson.

"Motor Degenerative Sequence in Dementia" was read by Dr. H. A. Tomlinson, St. Peter, Minn.

"Lucid Intervals in the Insane and Their Medicolegal Importance," by Drs. D. J. McCarthy and W. W. Hawke, Philadelphia, was read by Dr. Hawke and discussed by Drs. McCarthy and Hawke.

"Trauma as a Cause of Insanity" was read by Dr. Charles W. Burr, Philadelphia and discussed by Drs. William G. Spiller, Francis X. Dercum, Philadelphia; H. H. Hoppe, H. A. Tomlinson, St. Peter, Minn.; P. C. Knapp, Boston; Richard Dewey, Wauwatosa; Jones, Minneapolis; Julius Grinker, Chicago; Alfred Gordon, Philadelphia, and Dr. Burr.

"The Paranoid Group" was read by Dr. F. X. Dercum, Philadelphia, and discussed by Drs. L. Mettler and Harold N. Moyer, Chicago; P. C. Knapp, Boston, and Dr. Dercum.

"Blood Pressure in Paresis" was read by Dr. G. L. Walton, Boston, and discussed by Dr. F. X. Dercum, Philadelphia.

"Migrainic Psychoses. Apropos of Twelve Cases," was read by Dr. Alfred Gordon, Philadelphia, and discussed by Drs. S. Weir Mitchell and Charles K. Mills, Philadelphia; G. L. Walton, Boston; C. Eugene Riggs, St. Paul; William G. Spiller, Philadelphia; L. Mettler, Chicago; Fisher; P. C. Knapp, Boston; F. X. Dercum, Philadelphia; Gordon and S. Weir Mitchell.

WEDNESDAY, JUNE 6—AFTERNOON.

"Cases of Basilar Thrombosis," by Drs. E. E. Southard and N. K. Wood, Boston, was read by Dr. Southard.

"Paralysis of the Pharynx, with Four Years' Feeding with the Tube," was read by Dr. S. Weir Mitchell, Philadelphia, and discussed by Drs. P. C. Knapp, Boston, and Charles L. Dana, New York.

"Palliative Operations (Cerebral Decompression) in the Treatment of Tumors of the Brain" was read by Drs. William G. Spiller and Charles H. Frazier, Philadelphia.

"Present Status of Brain Surgery" was read by Dr. M. Allen Starr, New York.

These two papers were discussed by Drs. Charles K. Mills, Philadelphia; P. C. Knapp, Boston; Harvey Cushing, Baltimore; C. B. Burr, Flint, Mich.; C. H. Hughes, St. Louis; D. W. Crouse, Iowa; F. X. Dercum, Philadelphia, and Drs. Starr and Spiller.

"Unilateral Ascending Paralysis; Unilateral Descending Paralysis; Their Varieties; Their Causes and Pathology," was read by Dr. Charles K. Mills, Philadelphia, and discussed by Drs. Hoppe and Mills.

THURSDAY, JUNE 7—MORNING.

"Myasthenia Gravis" was read by Dr. C. Eugene Riggs, St. Paul.

"Multiple Neuritis Resembling Progressive Muscular Atrophy, with Report of Cases," was read by Dr. Julius Grinker, Chicago.

"Collective Versus Individualised Treatment of Neuroses and Psychoses," was read by Dr. Richard Dewey, Wauwatosa, Wis.

"Tumor of the Right Versus Tumor of the Left Frontal Lobe of the Brain" was read by Dr. W. C. Krauss, Buffalo, and discussed by Drs. P. C. Knapp, Boston; Henry D. Fry, St. Louis; H. A. Tomlinson, St. Peter, Minn.; Charles K. Mills, Philadelphia, and Dr. Krauss.

"Conjugate Deviation of the Eyes and Head and Disorders of the Associated Ocular Movements in Tumors and Other Lesions of the Cerebrum" was read by Dr. T. H. Weisenburg, Philadelphia, and discussed by Drs. Charles K. Mills and William G. Spiller, Philadelphia, and Dr. Weisenburg.

"Pathology of Uremic Hemiplegia" was read by Dr. J. H. W. Rhein, Philadelphia, and discussed by Drs. D. J. McCarthy, Philadelphia; Morton Prince, Boston; William G. Spiller, Philadelphia; E. D. Fisher, New York; T. H. Weisenburg, Philadelphia and Drs. Hoppe and Rhein.

"Pathology of Paralysis Agitans, with a Report of Twelve Cases with Necropsy," was read by Dr. C. D. Camp, Philadelphia, and discussed by Drs. D. J. McCarthy, Philadelphia; P. C. Knapp, Boston; E. J. Fisher, New York, and Dr. Camp.

The chairman announced the appointment of the following nominating committee: Drs. Howell T. Pershing, Denver; Edward B. Angell, Rochester, and Henry D. Fry, St. Louis.

Dr. Edward B. Angell, Rochester, N. Y., presented some *x*-ray and stereoscopic apparatus.

THURSDAY, JUNE 7—AFTERNOON.

The nominating committee presented the following names to serve as officers for the ensuing year, and on motion the secretary cast the ballot for them: Chairman, Dr. George L. Walton, Boston (*withdrew, see below*); secretary, Dr. T. H. Weisenburg, Philadelphia; delegate, Dr. D'Orsay Hecht, Chicago; alternate, Dr. Julius Grinker, Chicago.

"Serum Treatment of Exophthalmic Goiter," by Drs. J. J. Putnam and G. A. Waterman, Boston, as read by Dr. Waterman, and discussed by Drs. Harold N. Moyer, Chicago; Beebe, New York; Crafts, Minneapolis; Richard Dewey, Wauwatosa, and Dr. Waterman.

Dr. Howell T. Pershing, chairman of the nominating committee, reported that Dr. Walton had declined to accept the position as chairman, and on motion it was unanimously carried that the vote electing Dr. Walton be reconsidered, which was done.

The nominating committee then presented the name of Dr. Morton Prince, Boston, and on motion the secretary was instructed to cast the ballot for Dr. Prince as chairman.

"Personal Experience in the Treatment of Tabes by Co-ordinative Exercise" was read by Dr. E. W. Taylor, Boston, and discussed by Dr. W. N. Bullard, Boston.

"Multiple Neuritis, Non-diphtheritic, in Children," by Drs. H. M. Thomas and H. S. Barrenbaum, Baltimore, was read by Dr. Thomas, and discussed by Drs. W. N. Bullard, Boston; P. Zenner, Cincinnati, and Dr. Thomas.

"Clinical Physiopathology: Need of a New Classification of Diseases of the Nervous System," was read by Dr. L. H. Mettler, Chicago, and discussed by Dr. Howell T. Pershing, Denver, and Dr. Mettler.

"The Gradual Cure of Hysterical Paralysis" was read by Dr. Howell T. Pershing, Denver.

"Neurasthenia as Modified by Modern Conditions and Their Prevention" was read by Dr. Thomas C. Ely, Philadelphia.

"Landry's Paralysis, with a Report of Four Cases," by Drs. J. N. Hall and S. D. Hopkins, Denver, was read by Dr. Hall, and discussed by Drs. L. H. Mettler, Chicago; Wharton Sinkler, Philadelphia, and Dr. Hall.

"Affections of the Spinal Cord in Epileptics" was read by Dr. W. N. Bullard, Boston, and discussed by Dr. Howell T. Pershing, Denver, and Dr. Bullard.

Section on Cutaneous Medicine and Surgery.

TUESDAY, JUNE 5—AFTERNOON.

Dr. Abner Post, Boston, announced that the chairman of the Section, Dr. Douglas W. Montgomery, San Francisco, would be unable to be present on account of the recent earthquake and conflagration in his city. He also announced that the secretary, Dr. R. R. Campbell, Chicago, would be unable to be present.

It was thereon moved and carried that Dr. Ludwig Weiss of New York City be appointed temporary chairman. Dr. M. L. Heidingsfeld, Cincinnati, was appointed temporary secretary.

"Generalized Multiple Pigmented Sarcoma Originating in the Skin," by Drs. William Frick and Frank J. Hall of Kansas City, Mo. (Read by Dr. Hall.) Discussed by Drs. David Lieberthal, Chicago; A. Ravogli, Cincinnati; Alexander J. Anderson, Newport, R. I.; B. W. Stearns, Binghamton, N. Y., and Dr. Hall.

"Consequence of Lupus Vulgaris of the Ear," by Dr. A. Ravogli, Cincinnati. Discussed by Drs. M. L. Heidingsfeld and A. Ravogli, Cincinnati.

"Erythema Indurata (Bazin)," by Dr. Ludwig Weiss, New York City. Discussed by Drs. A. Ravogli and M. L. Heidingsfeld, Cincinnati; James C. White, Boston, and Dr. Weiss.

Dr. James C. White, Boston, announced that at a meeting of the American Dermatological Association, held in Cleveland, Ohio, last week, he was requested to present to the Section on Cutaneous Medicine and Surgery of the American Medical Association some information in regard to the progress which was being made by the Organization Committee in preparing for the next International Dermatological Congress, to be held in New York City in September, 1907. At the last meeting of the congress, held in Berlin, an invitation was presented to the congress on behalf of the Section on Cutaneous Medicine and Surgery of the American Medical Association by Dr. Henry W. Stelwagon, and another on behalf of the American Dermatological Association, to meet in this country, and that invitation had been accepted. An Organization Committee was selected by the officers chosen at the Berlin meeting, which was composed of 25 men from different parts of the country. That committee had been steadily at work and subcommittees had been appointed. The Committee on Finance had already raised nearly $12,000 for the expense of the meeting, this money having been subscribed almost exclusively by dermatologists in this country. Efforts were being made to increase this fund to at least $20,000. Three themes had been selected for general discussion at the meeting: "The Etiologic Relationship of the Micro-Organisms Found in the Exanthemata," "The Tropical Dermatoses," "The Immunization and Parasitology of Syphilis." Many prominent specialists, both from this country and abroad, are expected to take part in these discussions. Dr. White said that in September, 1906, a general prospectus of the meeting will be mailed to dermatologists in this country and abroad, inviting them to attend the meeting and to present papers. It will be specified, however, that the committee reserves the right to reject such communications as they see fit. This will be done to obviate the fault that has been found with past meetings of the congress, where so many papers have been presented that they failed to receive proper consideration. In June, 1907, a full program of the meeting will be sent to those interested in this field of medicine, which would contain all the details.

The chairman, Dr. Weiss, conveyed the thanks of the Section to Dr. White for his interesting communication.

The following nominating committee was appointed by the chairman: Drs. David Lieberthal and W. L. Baum, Chicago, and Albert E. Carrier, Detroit.

WEDNESDAY, JUNE 6—AFTERNOON.

The secretary, Dr. Heidingsfeld, read a communication from Dr. Kaspar Pischel, San Francisco, announcing the death of Dr. F. R. Day, in Honolulu, Hawaii, June 1, 1906. Dr. Day's name was on the program of the Section for an exhibition of wax models in cases of leprosy, which Dr. Pischel said were really works of art, as he could testify from personal observation while in Honolulu. Dr. Day was among the foremost physicians in Honolulu, and as a physician, citizen and man he was highly esteemed by the whole community.

Dr. William M. Davis, Denver, expressed the regret of the Section on the death of Dr. Day, and moved that the secretary be instructed to convey to the relatives of the deceased the sincere condolence of the Section on Cutaneous Medicine and Surgery on their heavy loss.

Dr. Henry G. Piffard announced the recent death, in Gibraltar, of Dr. Charles W. Allen, New York City, who had been an active member of the Section.

Dr. William S. Gotthelf, New York City, expressed the regrets of the Section on the death of Dr. Allen, and moved that the secretary be instructed to convey to the daughters of the deceased, who were his sole survivors, the sincere condolence of the Section on Cutaneous Medicine and Surgery on their heavy loss.

"The Therapeutic Value of Chrysophanic Acid in Dermatology," by Dr. Charles James Fox, Hartford, Conn. Discussed by Drs. Henry G. Piffard and William S. Gotthelf, New York City; James C. White, Boston; R. A. McDonnell, New Haven, Conn.; Edmund L. Cocks, New York City; Henry C. Baum, Syracuse, N. Y.; Ludwig Weiss, New York City.

"Lichen Planus of the Mouth and Lips, with Report of Case," by Dr. David Lieberthal, Chicago. Discussed by Drs. L. Duncan Bulkley, New York City; James C. White, Boston; Henry G. Piffard, New York City, and Dr. Lieberthal.

The chairman, Dr. Ludwig Weiss, gave a lantern slide exhibition bearing on his paper on "Erythema Induratum (Bazin)," which was read at the session of the Section.

"Myomata Cutis, with Report of Two Cases (Demonstrated from Lantern Slides)," by Dr. M. L. Heidingsfeld, Cincinnati.

"Aids to Accuracy and Efficiency in Radiotherapy," by Dr. Henry G. Piffard, New York City. Discussed by Drs. L. Duncan Bulkley, New York City; Williams, Richmond, Va.; J. C. Price, Scranton, Pa.; William S. Gotthelf and L. Duncan Bulkley, New York; Mihran K. Kassabian, Philadelphia; John B. Kessley, Iowa City, Iowa; H. P. Wells, St. Louis; William S. Newcomet, Philadelphia; David Lieberthal, Chicago, and Piffard.

"Endotheloma of the Skin," by William S. Gotthelf, New York City. Discussed by Drs. L. Duncan Bulkley, New York City; M. L. Heidingsfeld, Cincinnati; Edmund L. Cocks, New York, and William S. Gotthelf.

THURSDAY, JUNE 7—AFTERNOON.

"The Cure of Psoriasis; with a Study of 569 Cases Observed in Private Practice," by Dr. L. Duncan Bulkley, New York City. Discussed by Drs. Frederick A. Rhodes, Pittsburg, Pa.; C. P. Sylvester, Boston; William S. Gotthelf, New York City; Francis J. Shepherd, Montreal; James C. White, Boston; W. D. Calvin, Fort Wayne, Ind.; Gardner T. Swarts, Providence, R. I.; John B. Kessler, Iowa City, Iowa; Henry W. Stelwagon, Philadelphia; F. A. Kleinhans, Milwaukee, Wis.; William L. Baum, Chicago; David Lieberthal, Chicago, and Dr. Bulkley.

The nominating committee reported as follows: Chairman, R. R. Campbell, Chicago; secretary, Henry R. Varney, Detroit; delegate, M. L. Heidingsfeld, Cincinnati; alternate, Ludwig Weiss, New York City.

Dr. Heidingsfeld requested that his name be withdrawn from the list of nominations.

Dr. L. Duncan Bulkley, New York, moved that the report of the nominating committee be received. Seconded and carried.

On motion of Dr. Bulkley, Dr. R. R. Campbell, Chicago, was elected chairman for the ensuing year.

Dr. Bulkley then moved that Dr. Heidingsfeld be nominated for secretary. Seconded.

Dr. Varney withdrew his name in favor of Dr. Heidingsfeld.

Dr. Heidingsfeld was thereon elected secretary for the ensuing year.

On motion of Dr. Bulkley, Dr. Henry R. Varney, Detroit, was elected member of the House of Delegates.

On motion of Dr. Lieberthal, Dr. Ludwig Weiss was elected alternate member of the House of Delegates.

"A Note on the Erythemas Complicated with Internal Lesions," by Dr. Alembert W. Brayton, Indianapolis.

"A Record of Some Unusual Cases," by Dr. William S. Gotthelf, New York City.

"The Relation of Nerve Impulse to Cutaneous Inflammation," by Ernest L. McEwen, Chicago.

"A Case of Pemphigus Affecting the Mucous and Serous Membranes Only," by Dr. Edmund L. Cocks, New York City. Discussed by Dr. William S. Gotthelf and L. Duncan Bulkley, New York City.

Dr. Henry W. Stelwagon exhibited a number of photographs of interesting skin lesions.

Dr. Weiss, before declaring the Section adjourned, thanked the members for having honored him by electing him their temporary chairman, and for their prompt attendance and for the excellence of the papers presented.

Section on Laryngology and Otology.

TUESDAY, JUNE 5—AFTERNOON.

The first session met in the New Harvard Medical School at 2 p. m., and was called to order by the chairman, Dr. O. T. Freer, Chicago. Dr. W. Sohier Bryant, New York, was secretary.

A short address of welcome was given by Dr. Clarence J. Blake, Boston.

The chairman then read his address.

Dr. J. F. Bylington, Michigan, read a paper on "The Submucous Resection of the Nasal Septum, with Report of Fifty Operations."

Dr. Lee Maidment Hurd, New York City, read a paper on "Some Remarks on Submucous Resection, Based on Seventy-five Cases."

Dr. Robert C. Myles, New York City, read a paper entitled "A Second Report, After Ten Years' Experiences, Procedures and Results in Subperichondrial Operations on Cartilages of the Nasal Septum, and First Report on Subperiosteal Operations on the Bones of the Nasal Septum."

These three papers were discussed by Drs. T. R. Chambers, New York; J. S. Bishart, Toronto; J. C. Roe, New York; S. G. Richards, Massachusetts; Lilly, Boston; W. E. Casselberry, Chicago; Barnhill, Indiana; Emil Mayer, New York; Pischel, San Francisco; J. F. Byington, Michigan; L. M. Hurd, New York; R. C. Myles, New York. Sidney Yarkaner, New Jersey, exhibited instruments for the operation.

Dr. Pond spoke briefly of the appreciation of San Francisco physicians for the kindness shown by the profession after the calamity of April 18.

WEDNESDAY, JUNE 6—MORNING.

Dr. Frederick L. Jack, Boston, read a paper on "Sinusitis and Orbital Abscess, with Recovery After Killian's Operation." Discussed by Drs. G. C. Coakley, New York City; H. P. Mosher, Boston; J. H. Harris, New York City; Engelton, New Jersey; G. L. Richards, Fall River, Mass.; E. F. Ingals, Chicago; O. T. Freer, Chicago, and F. L. Jack.

Dr. Emil Mayer, New York City, read a paper on "Foreign Bodies in the Bronchi; Report of Three Cases." Discussed by Drs. E. F. Ingals, Chicago; A. Coolidge, Boston; S. H. Lodge, S. Yankowe, New York City; Horsfield, Hartford, Conn.; Shurly, Detroit; E. Mayer, New York City.

Dr. H. P. Mosher, Boston, read a paper on "Surgery of the Upper End of the Esophagus." Discussed by Drs. E. F. Ingals, E. Mayer, G. C. Coakley, Clark, Utica, N. Y.; R. C. Myles; C. M. Robertson and H. P. Mosher.

Dr. E. T. Gwathmey, New York City, read a paper entitled "Demonstration of a New Method of Anesthesia, Especially Adapted for Operations of the Upper Air Tract." Discussed by Drs. W. S. Bryant, R. C. Myles, L. A. Coffin, Sherman, Casselberry, Ingals, Robertson, M. H. Cryer and E. T. Gwathmey.

WEDNESDAY, JUNE 6—AFTERNOON.

The Section was called to order by the chairman at 2 p. m.

Dr. M. H. Cryer, Philadelphia, read a paper on "Some Variations in Frontal Sinuses."

Dr. C. G. Coakley exhibited radiographs illustrating a paper on "Skiagraph of the Air Sinuses."

These papers were discussed by Drs. L. A. Coffin, R. C. Myles, F. S. Snow, J. P. Clark, J. H. Harris, M. H. Cryer, H. P. Mosher, G. E. Shambaugh, G. H. Pierce and O. T. Freer.

Dr. George L. Richards, Fall River, Mass., presented a paper on "Atrophic Rhinitis, a Reproach to Rhinology." Discussed by Drs. W. E. Casselberry, O. T. Freer, A. H. Andrews, R. C. Myles, F. S. Snow, Elser, H. Smith, Cobb, Colby, Pond, C. F. Welty, J. L. Goodale, McDonald and Richards.

Dr. Cullen F. Welty, San Francisco, read a paper on "Acute and Chronic Suppuration of the Ear and Nose the Direct Cause of Facial Erysipelas." Discussed by Drs. J. L. Harris, J. W. Farlow, H. P. Mosher, John O. Roe and C. F. Welty.

THURSDAY, JUNE 7—MORNING.

Dr. C. M. Robertson, Chicago, read a paper on "Certain Facts Concerning Faucial Tonsils." Discussed by Drs. J. W. Farlow, J. L. Goodale, F. B. Sprague, C. F. Prince, C. F. Welty, A. H. Andrews, O. T. Freer and C. M. Robertson.

Dr. George E. Shambaugh, Chicago, gave a blackboard illustra-

tion of Histologic Specimens of Development of the Membranes of the Labyrinth." Discussed by Drs. N. H. Pierce, O. T. Freer and Shambaugh.

Dr. H. O. Reik, Baltimore, read a paper and exhibited a "Protection Sheet for Mastoid Surgery. An Algesimeter." Discussed by Drs. Dauser, F. B. Sprague, Eagelton, W. S. Bryant, P. Hammond and H. O. Reik.

Dr. W. Sohler Bryant, New York City, read a paper on "Results of Improved Technic in Otologic Surgery." Discussed by Drs. A. H. Andrews, P. Hammond, C. J. Blake, G. F. Welty, F. B. Sprague, Pond, J. F. Barnhill, H. O. Reik, E. B. Dench and W. S. Bryant.

Drs. E. S. Plummer and H. H. Germain, Boston, presented a paper on "A Modification of the Simple Mastoid Operation, which Shortens Convalescence by Facilitating Wound Repair." Discussed by Drs. F. B. Sprague, A. H. Andrews, J. F. Barnhill, G. L. Richards and E. M. Plummer.

Dr. Edward B. Dench, New York City, read a paper on "The Treatment of Intracranial Complications." Discussed by Drs. Hamilton Ballance, London, England; Charles L. Ballance, London, England; H. N. Pierce, F. L. Jack, A. B. Duell and E. B. Dench.

"Meningismus as Distinguished from Meningitis, from an Otologic Viewpoint," by Dr. Chevalier Jackson, Pittsburg.

THURSDAY, JUNE 7—AFTERNOON.

The election of officers resulted as follows: Chairman, Dr. S. Maksen Smith, Philadelphia; vice-chairman, Dr. Philip Hammond, Boston; secretary, Dr. W. Sohler Bryant, New York City; executive committee, J. F. Barhill, Indianapolis; Robert C. Myles, New York City; Otto T. Freer, Chicago; delegate, Dr. Otto T. Freer, Chicago.

Dr. Philip Hammond, Boston, read a paper on "Technic in the After-Care of Radical Mastoid Operation." Discussed by Drs. J. C. Blake, E. A. Crockett, Barnhill, Prince, C. F. Welty, Pischel and Hammond.

Dr. Philip D. Kerrison, New York City, read a paper on "The Use of Tuning Forks in the Diagnosis and Treatment of Deafness Due to Ossicular Rigidity." Discussed by Drs. C. J. Blake, Langhenbach, C. F. Welty and Philip D. Kerrison.

Dr. Clarence John Blake, Boston, read a paper on "Otology in Its Relation to Rhinology and Laryngology." Discussed by Drs. Shambaugh, Freer and Blake.

Dr. E. A. Crockett, Boston, read a paper on "Tuberculosis of the Middle Ear and Mastoid." Discussed by Drs. Pond, Ryerson, Toronto; C. F. Welty, F. L. Jack, Gildea and Crockett.

Dr. G. Sterling Ryerson, Toronto, Ont., read a paper on "Keratosis Obturans." Discussed by Drs. Crockett and Blake.

A hearty vote of thanks was given the profession of Boston for their handsome entertainment of the Section.

Section on Pharmacology and Therapeutics.

Dr. Thomas F. Reilly, New York, was in the chair and Dr. C. S. N. Hallberg, Chicago, was secretary.

TUESDAY, JUNE 5—AFTERNOON.

The meeting was called to order at 2:30 p. m. by Chairman Reilly in Tufts College Medical School.

The chairman introduced Dr. Frank G. Wheatley, Boston, who delivered the address of welcome.

The chairman then read a communication from the American Pharmaceutical Association, naming delegates to the Section.

Dr. Henry P. Hynson of Baltimore was introduced as chairman of the delegation from the Pharmaceutical Association and addressed the Section.

Dr. O. T. Osborne, New Haven, Conn., occupied the chair during the delivery of Chairman Reilly's address, which followed.

Dr. Heinrich Stern, New York, moved that a committee of three be appointed to act on the suggestions of Chairman Reilly, which were: 1, Revision of Pharmacopeia by representatives of the American Medical Association, the American Pharmaceutical Association and the National Chemical Society; 2, closer study of native plants and their active principles; 3, to study the relations of pharmacy to medicine.

Secretary C. S. N. Hallberg, Chicago, made a partial report.

Dr. O. T. Osborne, New Haven, Conn., read a paper entitled "The Therapeutic Uses of Thyroid Preparations." This paper was discussed by Drs. S. S. Cohen, Philadelphia; W. J. Robinson, New York; A. C. Croftan, Chicago; T. F. Reilly, New York; John Rogers, New York; A. W. Baer, Chicago; H. P. Hynson, Baltimore, and W. R. White, Providence, R. I., and Dr. Osborne.

Dr. Osborne appointed as members of the committee to act on the chairman's suggestions: Drs. H. Stern, New York; H. C. Wood, Jr., Philadelphia, and Chairman Reilly.

Dr. Robert A. Hatcher, New York, read a paper entitled "The Pharmacology of Digitalis."

Dr. H. C. Wood, Jr., Philadelphia, read a paper entitled "The Pharmacology of Veratrum."

These two papers were discussed togrther by Drs. G. H. Beebe, New York; H. R. Slack, Atlanta, Ga.; W. F. Waugh, Chicago; W. J. Robinson, New York; M. I. Wilbert, Philadelphia; W. C. Abbott, Chicago; C. S. N. Hallberg, Chicago; T. F. Reilly, New York, and Drs. Hatcher and Wood.

Dr. H. B. Sheffield, New York, read a paper entitled "Palatable Medication," which was discussed by Drs. John Rauschkolb, Columbus, Ohio; T. F. Reilly, New York; C. S. N. Hallberg, Chicago; W. J. Robinson, New York; H. P. Hynson, Baltimore, and Dr. Sheffield.

WEDNESDAY, JUNE 6—MORNING.

Dr. F. Pfaff, Boston, read a paper entitled "Normal Peristalsis of the Stomach and Intestines and the Effects on It of Certain Drugs." This paper was discussed by Drs. H. C. Wood, Jr., Philadelphia; A. L. Benedict, Buffalo, N. Y.; T. F. Reilly, New York, and Dr. Pfaff.

Dr. De Lancey Rochester, Buffalo, N. Y., read a paper entitled "The Treatment of Asthma," which was discussed by Drs. George Dock, Ann Arbor, Mich.; M. H. Fussell, Philadelphia; H. Stern, New York; S. S. Cohen, Philadelphia; G. N. Jack, Buffalo, N. Y.; W. J. Robinson, New York; W. D. Calvin, Ft. Wayne, Ind., and Dr. Rochester.

Dr. A. L. Benedict, Buffalo, N. Y., read a paper entitled "The Measurement of Diet in Ambulant Patients," which was discussed by Dr. H. Stern, New York; W. R. White, Providence, R. I.; E. B. Fullerton, Columbus, Ohio, and Dr. Benedict.

Dr. H. Stern, New York, read a paper entitled "The Diet in Albuminuria; a Clinical Experimental Study," which was discussed by Drs. A. C. Croftan, Chicago; A. L. Benedict, Buffalo, N. Y.; H. C. Wood, Jr., Philadelphia, and Dr. Stern.

Dr. M. H. Fussell, Philadelphia, read a paper entitled "Prescribing Versus Dispensing," which was discussed by Drs. H. D. Jump, Philadelphia; H. R. Slack, Atlanta, Ga.; W. D. Calvin, Ft. Wayne, Ind.; C. A. E. Codman, Philadelphia; Mary E. Dunning, Newburgh, N. Y.; Tracy, South Boston; F. R. Dame, Medford, Mass.; M. I. Wilbert, Philadelphia; N. B. Bayley, Haverstraw, N. Y.; C. S. N. Hallberg, Chicago, and Dr. Fussell.

WEDNESDAY, JUNE 6—AFTERNOON.

Dr. W. F. Waugh, Chicago, read a paper entitled "Solanin," which was discussed by Drs. George F. Butler, Chicago; M. C. Thrush, Philadelphia, and Dr. Waugh.

Dr. Max Einhorn, New York, read a paper entitled "The Dietetic Treatment of Diabetes Mellitus," which was discussed by Drs. Stern, New York; S. S. Cohen, Philadelphia; O. T. Osborne, New Haven, Conn., and Dr. Einhorn.

Dr. M. I. Wilbert, Philadelphia, read a paper entitled "The Coming Revision of the U. S. Pharmacopeia. Some Suggestions and a Plea for More Active Medical Representation." This paper was discussed by Drs. O. T. Osborne, New Haven, Conn.; W. J. Robinson, New York, and C. S. N. Hallberg, Chicago (and others, see below).

Dr. O. T. Osborne made a motion that a committee of three be appointed by the chairman to consider the recommendations in Dr. Wilbert's paper and to report at the next annual session. This motion was discussed by Drs. W. J. Robinson, New York, and S. Solis Cohen, Philadelphia. The chairman appointed the following on this committee: Drs. O. T. Osborne, New Haven, Conn.; W. J. Robinson, New York; F. Edwin Lewis, New York.

Discussion was continued on Dr. Wilbert's paper by Drs. H. P. Hynson, Baltimore; M. G. Motter, Washington; S. S. Cohen, Philadelphia; Reid Hunt, Washington, D. C., and Dr. Wilbert.

Prof. C. Lewis Diehl, Louisville, Ky., read a paper entitled "The National Formulary. Its Attitude to Pharmaceutical Proprietaries."

Dr. H. Stern asked for instructions, as Secretary, for the meeting of the House of Delegates. In accord with this, Secretary Hallberg read a report and a motion was made that the Section on Pharmacology and Therapeutics favors the establishment of a National Board of Health, that the delegate be instructed to lay that matter before the House of Delegates. The motion was discussed by Drs. S. Solis Cohen and F. Edwin Lewis. It was decided to have the chairman appoint a committee of three to consider the resolution suggestion by Dr. Hallberg. On this committee the chairman appointed Drs. S. S. Cohen, Philadelphia; H. E. Lewis, New York; H. Stern, New York.

Mr. Lyman F. Kebler, Washington, D. C., read a paper entitled "Nostrums and Fraudulent Schemes for Exploiting Them."

Dr. S. Solis Cohen, Philadelphia, read a paper entitled "The Limit of Proprietorship in Materia Medica," which was discussed by Drs. W. J. Robinson, N. Y.; M. I. Wilbert, Philadelphia; H. E. Lewis, New York; Reid Hunt, Washington, D. C.; H. P. Hynson, L. F. Kebler, Washington, D. C.; C. L. Diehl, Louisville, Ky., and S. Solis Cohen, Philadelphia.

THURSDAY, JUNE 7—MORNING.

Dr. E. B. Fullerton, Columbus, Ohio, read a paper entitled "The Quinin Treatment of Chorea." Discussed by Drs. N. R. Coleman, Columbus, Ohio; E. B. Fullerton, Columbus, Ohio; S. S. Cohen, Philadelphia; A. W. Baer, Chicago; F. E. Lewis, New York; C. H. Hughes, St. Louis, and Butler.

Prof. W. A. Puckner, Chicago, read a paper entitled "The Chemistry of the Organic Silver Compounds." Discussed by Drs. S. S. Cohen, Philadelphia; W. J. Robinson, New York; H. P. Hynson, Baltimore; C. H. Hughes, St. Louis, Mo.; C. S. N. Hallberg, Chicago, and Professor Puckner.

Dr. J. M. Johnston, Boston, read a paper entitled "Addenda to Therapeutic Measures in Certain Forms of Nephritis." Discussed by Drs. W. J. Robinson, New York; A. R. Elliott, Chicago, and Dr. Johnson.

Dr. W. J. Robinson, New York, read a paper entitled "A Novel Method of Using Strychnin and Hydrastin, Particularly in Vesical and Sexual Weakness." Discussed by Drs. T. Tracy, Boston; W. C. Abbott, Chicago; A. L. Benedict, Buffalo, N. Y., and Dr. Robinson.

Dr. A. L. Benedict, Buffalo, N. Y., called the attention of the members of the Section to the working of an ingenious dietetic apparatus invented by Prof. Irving Fisher of Yale College.

THURSDAY, JUNE 7—AFTERNOON.

Mr. W. A. Puckner, Chicago, was elected a pharmaceutical member of the Section.

Dr. H. E. Lewis presented the report of the committee on resolutions, which was approved.

Dr. H. Stern, delegate of the Section to the House of Delegates, reported a great deal accomplished during the session.

A vote of thanks was tendered Dr. G. H. Simmons, Chicago, General Secretary of the Association, for the able and efficient manner in which he has conducted the business of the Association during the past year, and for his especial interest in this Section.

Dr. O. T. Osborne, New Haven, Conn., in behalf of the Nominating Committee, announced the following nominations, which were unanimously elected: Chairman, H. C. Wood, Jr.; vice-chairman, H. R. Slack, La Grange, Ga.; Secretary, C. S. N. Hallberg, Chicago; Delegate, S. Solis Cohen, Philadelphia.

The chair appointed as a delegation to the next meeting of the American Pharmaceutical Association Dr. W. J. Robinson, New York; Mr. W. A. Puckner, Chicago; Drs. F. G. Wheatley, Boston; M. V. Tyrode, Boston; M. I. Wilbert, Philadelphia.

Dr. E. Otis, Boston, read a paper entitled "The Tuberculosis Dispensary. Its Value, Methods and Limitations." Discussed by Drs. O. T. Osborne, New Haven, Conn.; K. Dunham, Cincinnati; F. E. Lewis, New York; S. S. Cohen, Philadelphia; Kenyon, Boston; T. F. Reilly, New York, and Dr. Otis.

Dr. C. S. N. Hallberg, Chicago, read a paper entitled "The External

Preparations of the U. S. Pharmacopeia (Eighth Decennial Revision)." Discussed by Drs. A. W. Baer, Chicago; W. J. Robinson, New York; H. P. Hynson, Baltimore, and Dr. Hallberg.

Dr. A. Jacobi, New York, read a paper entitled "Methylthionin Hydrochlorid in Inoperable Cancer." Discussed by Drs. H. R. Slack, Atlanta, Ga.; W. J. Robinson, New York; S. S. Cohen, Philadelphia; J. M. Morton, New York, and Dr. Jacobi.

Dr. Slack assumed chair, owing to Chairman Reilly having to leave.

The Section tendered a vote of thanks to the retiring chairman and secretary for their efficient work and fair conduct of the sessions.

Dr. C. L. Leonard, Philadelphia, read a paper entitled "The Therapeutic Uses and Dangers of the Roentgen Rays."

Dr. R. H. Boggs, Pittsburg Pa., read a paper entitled "The Application of the Roentgen Rays in the Treatment of Superficial Lesions."

Dr. Ennion G. Williams, Richmond, Va., read a paper entitled "The Treatment of Malignant Disease by the Roentgen Rays."

These three papers were discussed by Drs. G. C. Johnson, Pittsburg, Pa.; Percy Brown, Boston; J. H. Stuart, Minneapolis, Minn.; C. A. Dennett, Boston; J. M. Morton, New York; M. K. Kassabian, Philadelphia; K. Dunham, Cincinnati; M. H. Wheatland, Newport, R. I.; C. S. N. Hallberg, Chicago, and Drs. Leonard and Boggs.

Section on Pathology and Physiology.

TUESDAY, JUNE 5—AFTERNOON.

Dr. Henry A. Christian, Boston, chairman, delivered an address on "Recent Work in Pathology and Physiology."

Dr. E. E. Southard, Boston, read a paper entitled "A Study of Acute Leptomeningitis (*Streptococcus pyogenes*)."

Dr. Gustav F. Ruediger, Chicago, read a paper on "Bacteria of Scarlatinal and Normal Throats," which was discussed by Drs. W. J. Raymond, Washington, D. C.; Henry A. Christian, Boston; W. H. Welch, Baltimore; J. M. MacCaskey, Ft. Wayne.

Dr. S. B. Wolbach, Boston, read a paper on "Blastomyces Groups of Organisms," which was discussed by Dr. W. Ophüls, San Francisco.

A paper by Drs. R. M. Pearce and J. L. Archambault, Albany, N. Y., on "Tuberculosis of an Adenomyoma of the Uterus" was read by Dr. Robertson, and discussed by Dr. Henry A. Christian, Boston.

Dr. E. E. Tyzzer, Boston, read a paper entitled "The Simultaneous Occurrence of Two Non-Related Tumors in a Mouse."

Dr. John C. Hemmeter, Baltimore, described and gave a blackboard illustration of "An Improved Operative Method of Forming an Experimental Accessory (Pawlow) Stomach of the Dog."

Dr. Samuel F. Orton, Boston, read a paper on "Pathologic Findings in Two Cases of Mycosis Fungoides."

WEDNESDAY, JUNE 6—MORNING.

Dr. Winfield S. Hall, Chicago, read in abstract the paper on "Determination of the Normal Temperature of Closed Inguinal Fold of Child and Its Clinical Significance," by Dr. A. H. Parks, Chicago, which was discussed by Dr. Meltzer, New York.

Dr. Winfield S. Hall, Chicago, also read in abstract a paper on "The Influence of Intraperitoneal Injection of Warm Sterile Normal Saline Solution in Cases of Intraperitoneal Hemorrhage," by Dr. Mark Jampolis, Chicago, which was discussed by Drs. S. J. Meltzer, New York, and V. C. Vaughan, Ann Arbor.

Dr. Winfield S. Hall, Chicago, presented an abstract of a paper on "Diagnosis of Abdominal Hemorrhage," by Dr. H. S. Hollenbeck, Chicago.

Dr. W. T. Lombard, Ann Arbor, Mich., read a paper on "Recording Changes of Weight Occurring within Short Intervals of Time," which was discussed by Drs. Graham Lusk and S. J. Meltzer, New York.

A committee to nominate officers for the ensuing year, to report after the morning session June 7, was announced as follows: Drs. W. Ophüls, San Francisco; F. B. Wynn, Indianapolis, and W. B. Cannon, Boston.

Dr. W. B. Cannon, Boston, read a paper on "Motor Activities of Alimentary Canal After Splanchnic and Vagus Section," which was discussed by Drs. W. Ophüls, San Francisco; S. J. Meltzer, New York, and Winfield S. Hall, Chicago.

Dr. Henry Sewall, Denver, read a paper entitled "Experiments on Venous Blood Pressure in Man," which was discussed by Dr. W. T. Lombard, Ann Arbor.

Dr. Frederick P. Gay, Boston, read a paper on "Causes of Error in Elective Absorption Experiments."

Dr. Max von Frey, Wurzburg, Germany, read a paper on the "Distribution of Afferent Nerve Fibers in the Skin," which was discussed by Drs. L. F. Barker, Baltimore; S. J. Meltzer, New York; S. T. Frank, Waverly, Mass., and Harvey Cushing, Baltimore.

WEDNESDAY, JUNE 6—AFTERNOON.

A joint meeting was held with the Section on Practice of Medicine.

Dr. Joseph A. Capps, Chicago, read a paper entitled "Some Observations on the Effect of the Withdrawal of Fluid from the Thorax on the Blood Pressure."

Dr. Sherman G. Bonney, Denver, read a paper on "Chronic Non-Tubercular Affections of the Lung."

Dr. John H. Musser, Philadelphia, read a paper on "The Diagnosis and Treatment of Abscess, Loculated Empyema and Gangrene of the Lung."

Dr. Frederick Forchheimer, Cincinnati, read a paper on "Treatment of Pleurisy with Effusion."

The above four papers were discussed by Drs. J. C. Wilson, Philadelphia; J. N. Hall, Denver; C. E. Edson, Denver; C. M. Cooper, San Francisco, and D. L. Rochester, Buffalo.

Dr. Percy Musgrave, Boston, read a paper on "Cytology of Pleural Effusions."

Dr. L. W. Ladd, Cleveland, read a paper on "Bacteriology of pleural effusions."

THURSDAY, JUNE 7—MORNING.

The paper on "Treatment of Emaciation," by Dr. L. Breisacher, Detroit, was read by the secretary.

Dr. T. W. Hastings, New York City, read a paper on "Albumins in the Urine," which was discussed by Drs. Henry A. Christian, Boston; G. W. McCaskey, Ft. Wayne, Ind.; F. C. Wood, New York, and L. W. Ladd, Cleveland.

Dr. H. E. Robertson, Albany, read a paper on "Ether Glycosuria."

Dr. G. W. McCaskey, Ft. Wayne, Ind., read a paper on "Relation of Uric and Phosphoric Acid Excretion, with an Analysis of One Hundred Cases," which was discussed by Dr. Graham Lusk, New York.

Dr. Graham Lusk, New York, presented a paper on "Lactic Acid in Metabolism."

Dr. William J. G. Gies' paper on "Mucoid Salts" was read by Dr. William Salant, New York.

Dr. William Salant, New York, read a paper on "The Pathology of the Bile."

Dr. Wesley Mills, Montreal, read a paper entitled "A Physician's Creed, Past and Present, as to the Physiology of the Heart." A vote of appreciation was extended to Dr. Mills.

The nominating committee presented the names of Dr. Walter L. Bierring, Iowa City, Iowa, for chairman; Dr. W. B. Cannon, Boston, secretary, and Dr. W. S. Hall, Chicago, delegate.

The report was adopted and the ballot cast by the chairman on motion of Dr. T. W. Hastings, New York.

FRIDAY, JUNE 8—MORNING.

Dr. Walter L. Bierring, Iowa City, Iowa, read a paper entitled "A Study of Blood in Banti's Disease Before and After Splenectomy," which was discussed by Dr. Maximilian Herzog, Manila, P. I.

Dr. M. J. Rosenau, Washington, D. C., read a paper on "Cause of Sudden Death Following the Injection of Horse Serum," which was discussed by Drs. V. C. Vaughan, Ann Arbor, Mich.; G. F. Ruediger, Chicago, and Theobald Smith, Boston.

Dr. D. H. Bergey, Philadelphia, presented a paper entitled "Studies in Phagocytosis," which was read by Dr. Christian.

Dr. Joseph Farland, Philadelphia, read a paper on "Experimental Phagocytosis."

Dr. Warfield T. Longcope, Philadelphia, read a paper entitled "A Study of Bone Marrow in the Terminal Stages of Acute Infections."

Dr. W. G. MacCallum, Baltimore, read a paper on "Unusual Varieties of Cirrhosis of the Liver," which was discussed by Dr. W. Ophüls, San Francisco.

Dr. W. S. Hall, Chicago, made a motion, that, owing to the shortness of time, papers 8, 28 and 33 be regarded as "read in brief," and referred to the executive committee with the recommendation that they be published. Motion carried. These papers were: "Melanotic Carcinoma," by Dr. Henry Albert, Iowa City, Iowa; "Specific Therapy in Typhoid Fever—Six Years' Experience in 132 Cases," by Dr. Mark W. Richardson, Boston; and "Blood Plates: Their Significance as an Index to the Effects of Climatologic Changes, Especially Altitude, on the Blood," by Dr. George T. Kemp, Champaign, Ill.

Dr. J. H. Pratt, Boston, read a paper on "Variations in the Number of Blood Platelets in Disease."

Dr. Shepherd I. Franz, Waverly, Mass., read a paper entitled "Observations on the Functions of the Association Areas (Cerebum) in Monkeys."

Dr. Claude A. Smith, Atlanta, Ga., read a paper entitled "The Causative Factor in the Production of the Dermatitis of Ground Itch," which was discussed by Dr. Henry A. Christian, Boston.

Dr. William Salant, New York, made a brief preliminary report on "Influence of Alcohol on Hepatic Glycogen."

Book Notices

TREATMENT OF GONORRHEA IN THE MALE. By C. Leedham-Green, M.B., F.R.C.S., Senior Surgeon to Out-Patients, Queen's Hospital, Birmingham, etc. Cloth. Pp. 151. Price, $2.00 net. New York: William Wood & Co.

The anatomy of the bladder and urethra is briefly given, the important distinction between anterior and posterior urethra due to the action of the compressor urethræ being emphasized. After four chapters devoted to symptoms and diagnosis, in which emphasis is laid on the careful examination of the urine, the treatment is taken up. Prophylactic and abortive measures, it is stated, have not proved efficacious; internal remedies may be used in the earliest stages, but in the majority of cases local injections of non-irritating antiseptics may be begun at once. Stress is laid on the methods of determining when the inflammatory process is terminated. In chronic urethritis irrigation of the entire urethra by Diday's method is recommended, with subsequent treatment of localized inflammation by instillation or eventually dilatation of contracted portions of the urethra. The complications of gonorrhea are fully described with the exception of conjunctivitis and some of the rarer constitutional manifestations. The relation of gonorrhea to marriage is dealt with in the final chapter.

CASE TEACHING IN MEDICINE. A Series of Graduated Exercises in the Differential Diagnosis, Prognosis and Treatment of Actual Cases of Disease. By R. C. Cabot, A.M., M.D., Instructor in Medicine in the Harvard Medical School and Physician to Out-patients at the Massachusetts General Hospital. Cloth. Pp. 214. Price, $1.50. Boston: D. C. Heath & Co. 1906.

This little book has the merit of being novel. It is not in-

tended to take the place of bedside work or ordinary clinical instruction, but to give the student training in the interpretation of facts. The successful physician, of course, has to learn, first, to see things, and, second, to interpret what he sees. The exercises in this book are designed to train him in the latter ability. As Cabot puts it, "After the student has learned to open his eyes and see, he must learn to shut them and think." If rightly used, the book will be a valuable help in training students to correct and logical thinking. The case histories are concisely yet clearly given, with just enough of the leading points omitted, and enough misleading facts included to exercise the student in the ability to disregard the non-essentials and to seek by still further questioning for the essentials that are omitted. These are not purely hypothetical cases, but are, we judge, cases whose histories have been obtained from hospital and private records. In the teachers' edition suggestive hints are given as to questions that can be asked of the class, and the answers also are included. The indexes are very complete. While something might be said against this method of teaching as compared to the similar methods with a concrete case before the student, there are many things that can be said in favor of this plan, and to those who wish to adopt the case teaching in medicine the book can be most heartily recommended.

OPERATIVE OTOLOGY. Surgical Pathology and Treatment of Diseases of the Ear. By C. J. Blake, M.D., Professor of Otology in Harvard University, and H. O. Reik, M.D., Associate in Ophthalmology and Otology, Johns Hopkins University. Cloth. Pp. 359. Price, $3.00. New York: D. Appleton & Company, 1906.

This book contains 359 pages including a well arranged index. There are 13 full-page plates and 40 illustrations in the text and, as a rule, it must be said that the pictures are very inferior. Such illustrations as are found opposite the title page or on pages 4, 5, 13, 15 are very unsatisfactory, provided they are intended to mean anything. The brain and skull specimens, when seen in the original were, doubtless, both interesting and instructive, but as reproduced in the illustrations they are uninstructive.

A similar criticism may be made of some of the bone specimens reproduced in the illustrations, as they seem to be rather meaningless in their appearance. We regret to see so many time-honored pictures in the text. It would seem as if most of these old pictures had nearly served their usefulness, and while perhaps nothing better can be found on certain phases of the subject, nevertheless, for the sake of novelty, it would be refreshing to find a text-book in which new pictures had taken the place of the old.

While we do not desire to discourage a high literary plane for medical books, we earnestly believe that books of this character written in perfectly plain, readable and uncomplicated English, are much better for the average medical reader. It is difficult to read a book in which the literary style is so "high" as to require one to read a sentence over a number of times in order to ferret out the author's meaning. Perhaps this criticism would not be necessary for others, but we have been compelled to follow this course in a good many pages of the book under consideration.

Many of the chapters are both interesting and instructive, as, for instance, chapter 2, on "Aseptic Technic." This chapter is particularly commendable because it goes into all of the minute preparations for an operation, the preparation of instruments and appliances, the preparation of the operator, operating suit, etc. Not many books are as satisfactory in their explanations and suggestions concerning these subjects as the one under consideration. We believe that it would be decidedly advantageous to everyone expecting to do aural surgery to peruse this chapter carefully several times. The suggestions on the subjects of anesthesia and anesthetics are very good and clear.

Chapter 7, on mastoid operations, is an interesting chapter, and contains many points on which the aural surgeon may rely. We distinctly object, however, to the paragraph on page 246 in which the authors says, "The first opening in the cortex may be made either with a *gouge* or chisel, and should in all cases be large enough to admit of free access to the mastoid cavity." The modern mastoid operator should be sufficiently well posted as to the anomalous positions of the sigmoid sinus to preclude the possibility of the use of any instrument which may plunge or bore itself into the substance of the mastoid cortex as does a gouge or drill. In this operation the cortex should be removed gradually, shaving by shaving, until the interior of the shell is exposed and we are well aware as to the normal or abnormal position of its contents. We also take the liberty of criticising the picture showing the position of Allport's retractors in the mastoid wound. If we recall aright Allport devised these retractors some years ago, when the usual opening in the wound was small. At that time one pair of retractors was sufficient to keep the wound open and to produce sufficient pressure to control hemorrhage, but as the mastoid operation developed and became more extensive in its character, and a much larger wound was necessary in order to fully expose the parts, it became necessary to use two retractors instead of one, one pair in the upper angle of the wound and the other in the lower; for by using two sets of retractors instead of one and expanding the arms of the retractors with sufficient force, the operative area becomes fully exposed and all hemorrhage in the soft parts ceases. For the modern operator, therefore, one retractor is not sufficient, and the retractors should also be much stronger and thicker than the one depicted in this book and should also be expanded with much more vigor in order to control all soft part hemorrhage. The authors in this chapter recommend the blood clot method of dressing. We can not agree with them as regards the wisdom of this method of procedure, and believe that it will at least have to be tried much more and longer before it will receive the endorsement of modern operators.

Chapter 8, devoted to adenoids, and also to blood infusions and lumbar punctures, is a very commendable chapter, especially as it goes into details concerning the operative methods of the last two procedures.

State Boards of Registration

COMING EXAMINATIONS.

NEW HAMPSHIRE State Medical Board, Concord, July 6-7. Regent, H. C. Morrison, Concord.

ARKANSAS State Medical Examining Board, Little Rock, July 10. Secretary, J. P. Runyan, Little Rock.

BOSTON State Board of Registration in Medicine, State House, Boston, July 10-11. Secretary, Edwin B. Harvey, Boston.

CONNECTICUT Medical Examining Board, City Hall, New Haven, July 10-11. Secretary, Charles A. Tuttle, New Haven.

MAINE Board of Registration of Medicine, State House, Augusta, July 10-11. Secretary, W. J. Maybury, Saco.

OREGON State Board of Medical Examiners, Portland, July 10-12. Secretary, Byron E. Miller, Portland.

VERMONT State Board of Medical Registration, Burlington, July 10-12. Secretary, W. Scott Nay, Underhill.

WEST VIRGINIA State Board of Health, Charleston, July 10-12. Secretary, H. A. Barbee, Point Pleasant.

WISCONSIN State Board of Medical Examiners, Madison (Park Hotel), July 10-12. Secretary, J. V. Stevens, Jefferson.

SOUTH DAKOTA Board of Medical Examiners, Watertown, July 11-12. Secretary, H. E. McNutt, Aberdeen.

DISTRICT OF COLUMBIA Board of Medical Supervisors, Washington, D. C., July 12. Secretary, W. C. Woodward, Washington, D. C.

Reciprocity in Illinois.—The State Board of Health withdrew from the American Confederation of Reciprocating State Medical Examining and Licensing Boards at the meeting held in Chicago, June 20, 1906, and by unanimous resolution declined to reciprocate after Jan. 1, 1907, with any state board which exacts a supplemental examination of an applicant who has passed an examination before another board, or which requires that the applicant shall have practiced one year in the state in which he was licensed, or requires that the license issued to said applicant be dated one year previous.

The following resolutions were also adopted:

1. *Resolved*, That the Illinois State Board of Health will accept, in lieu of the examination provided for in Section 2 of the Act to Regulate the Practice of Medicine in the State of Illinois, approved April 24, 1899, satisfactory evidence of an examination at least equivalent to that exacted by the rules of the Illinois State Board of Health, successfully passed in the United States Army, the United States Navy or the United States Public Health and Marine-Hospital Service, by a surgeon in the service of the United States at the time of making application for a state certificate to practice medicine in the State of Illinois.

2. *Resolved*, That the application of a physician for a state certificate based on a state license issued, after examination, by a

state board with which the Illinois State Board of Health sustains reciprocal relations, must be accompanied by letters of recommendation with regard to the moral, professional and ethical character of the applicant:

(a) From at least two members of the state board of examination issuing the original license, who shall certify that they have personally known the applicant for one year or more; or

(b) From a state, district, county or city medical society in the state from which the applicant comes; or

(c) From at least two of the duly elected officers of such state, district, county or city medical society, who shall certify that they have personally known the applicant for one year or more; or

(d) From at least two physicians approved by the state board of health, who are of national reputation, and who reside in the state from which the applicant comes, and who shall certify that they have personally known the applicant for one year or more; and

(e) From at least two reputable physicians, approved by the state board of health, of the county in which the applicant last resided.

Massachusetts March and May Reports.—Dr. E. B. Harvey, secretary of the Board of Registration in Medicine, reports the written examinations held at Boston, March 13-14, and May 8-9, 1906. The number of subjects examined in was 11; total number of questions asked, 60; percentage required to pass, 70.

At the March examination the total number of candidates examined was 77, of whom 47 passed, including 3 non-graduates and 4 osteopaths, and 30 failed, including 13 non-graduates and 2 osteopaths. The following colleges were represented:

College.	Year Grad.	Per Cent.
PASSED.		
College of P. & S., Iowa*	(1882)	70.1
Baltimore University	(1905)	71.6
University of Boston	(1903) 77.8; (1905)	75
Harvard University	(1902) 76.6; (1903) 75.6; (1904) 73.5, 84; (1905) 70.5, 73.5, 74.3, 75.1, 75.3; (1906) 74.5.	77.8,
College of P. & S., Boston	(1904) 70, 75; (1905) 70,	70.6
Tufts College Med. School	(1905) 70.5, 72.8, 73.1, 73.3, 81.8, 80.8; (1906) 74.6.	
New York Homeo. Med. Coll.	(1903)	72
Leonard Med. Coll.	(1904)	71.5
University of Pennsylvania	(1904) 79.3,	81
Medico-Chirurgical College, Philadelphia	(1901)	81.6
Woman's Med. Coll. of Philadelphia	(1883) 84.3; (1904)	74.3
University of the South	(1905)	71.8
University of Vermont	(1905) 74.6,	77.5
Queen's University, Ontario	(1905) 70, 72; (1903)	75.8
FAILED.		
Illinois Med. Coll.	(1902)	66.1
Kentucky School of Med.	(1904);	66.6
Baltimore Med. Coll.	(1901) 61.1; (1903) 43.5; (1904) (1905) 54, 66.3; (1905)†.	64.8;
Maryland Med. Coll.	(1905)	64.3
College of P. & S., Boston	(1905)	52.5
Tufts College Med. School	(1905)	67, 68.1
Albany Med. Coll.	(1892)	55.8
Laval University, Quebec	(1905) 54.8,	57.3

At the May examination the total number of candidates examined was 47, of whom 22 passed, including 2 non-graduates and 3 osteopaths, and 25 failed, including 10 non-graduates and 5 osteopaths. The following colleges were represented:

College.	Year. Grad.	Per Cent.
PASSED.		
Medical School of Maine	(1897) 71.8; (1905)	75.5
Baltimore Med. Coll.	(1905)	71.6
Tufts College Med. School	(1905)	71, 76
Harvard University	(1903) 73; (1904) 72.1, 80.1; (1905) (1906) 72.8, 73.1.	70.3;
Boston University	(1903)	76
University of Michigan	(1897)	71.8
Dartmouth Med. Coll.	(1906)	76.5
Albany Med. Coll.	(1905) 76.5; (1906)	77.3
McGill University, Quebec	(1905)	76.3
FAILED.		
Kentucky School of Med.	(1904)	66
Baltimore Med. Coll.	(1905) 53.5; (1905)	†
Maryland Med. Coll.	(1905)	64.1
Baltimore University	(1903) 38.3;	50.8
Tuft's College Med. School	(1905)	64.8
College of P. & S., Boston	(1905)	50.5
Leonard Med. Coll.	(1905)	63.1
Laval University	(1905)	55.6

* Now the Keokuk Medical College, College of Physicians and Surgeons.

† Examination not completed.

South Carolina June Report.—Dr. W. M. Lester, secretary of the South Carolina State Board of Medical Examiners, reports the written examination held at Columbia, June 12-14, 1906. The number of subjects examined in was 13; total number of questions asked, 11; percentage required to pass, 75. The total number of candidates examined was 52, of whom 39 passed and 13 failed. The following colleges were represented:

College.	Year. Grad.	Per Cent.
PASSED.		
Howard University	(1905)	75.7
Atlanta College of P. & S.	(1906)	83.7
University of Georgia	(1906)	80.2
University of Louisville	(1905)	89.5
Hospital Coll. of Med., Louisville	(1905)	79.1
University of Maryland	(1906) 82.1,	82.3, 88.7
North Carolina Med. Coll.	(1906)	90.5
University of North Carolina	(1906)	83.1
Leonard Med. Coll.	(1905) 81; (1906)	83.6
Jefferson Med. Coll.	(1893) 91.1; (1906)	90.1
South Carolina Med. Coll.	(1901) 81.7; (1905) 75, 79.3, 81.7, 86, 88, 94; (1906) 78.3, 79.7, 82, 83.5, 83.6.	
University of the South	(1897)	83.8
University of Nashville	(1905) 78, 83.6; (1906)	78.1, 81.3, 85.6, 91.1
Meharry Med. Coll.	(1906)	75, 81
Vanderbilt University	(1906)	88.7
Med. Coll. of Virginia	(1906)	80.5, 85.3, 90.5
FAILED.		
University of Georgia	(1906)	54.3, 66.7, 69.2
Maryland Med. Coll.	(1904) 62.7, 71.1, 79.5;* (1906)	65.8
Leonard Med. Coll.	(1906)	71.2
South Carolina Med. Coll.	(1905)	55.6
Meharry Med. Coll.	(1906)	71.5
University of Tennessee	(1905)	48.2
Knoxville Med. Coll.	(1905)	53.1
Chattanooga Med. Coll.	(1905)	68.6

* Made less than 60 per cent. on one branch (chemistry).

Wyoming June Report.—Dr. S. B. Miller, secretary of the Wyoming State Board of Medical Examiners, reports the written examination held at Cheyenne, June 6, 1906. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 7, of whom 4 passed and 3 failed. The following colleges were represented:

College.	Year. Grad.	Per Cent.
PASSED.		
Denver & Gross Coll. of Med.	(1905)	80.1, 81.3
St. Louis University	(1904)	75
University of Pennsylvania	(1904)	78.7
FAILED.		
University of Michigan*	(1883)	
Missouri Med. Coll*	(1889)	
Royal University, Padua, Italy*	(1884)	

* Per cent. not given.

Society Proceedings

COMING MEETINGS.

American Orthopedic Association, Toronto, Canada, Aug. 20-21.
British Medical Association, Toronto, Canada, Aug. 21-25.
American Roentgen Ray Society, Niagara Falls, Aug. 29-31.
Am. Academy of Ophthal. and Otolaryn., Detroit, Aug. 30-Sept. 1.
Western Surgical and Gyn. Ass'n., Salt Lake City, Aug. 31-Sept. 1.

AMERICAN SURGICAL ASSOCIATION.

Annual Meeting, held at Cleveland, Ohio, May 30-June 1, 1906.

(Continued from page 2017.)

Carcinoma and Sarcoma Appearing in Same Patient.

DR. ALBERT VANDER VEER, Albany, N. Y., for many years has had in mind the possibility of the duality of malignant diseases, that is, as to carcinoma and sarcoma presenting in the same patient, and as to the genesis of many cases appearing in the same family. He was first attracted to this subject by the case of Mrs. P. R., aged 57, who had an acute carcinoma of the left breast. While being prepared for operation she was suddenly seized with a convulsion, ending in immediate death. An autopsy revealed a tumor of the dura, extending outward, ulcerating nearly through the cranium, and which caused deep pressure on the brain substance. No other growths were found in the brain, and, aside from the left breast, all other organs were in a healthy condition. Microscopical examination classed the brain tumor as a sarcoma. Microscopical examination of the tumor of the breast showed it to be an acute scirrhus carcinoma.

In May, 1880, he was called to see Miss C. J., aged 50. For nearly two years she had noticed a growth in her left breast, which finally ulcerated. On examination a carcinoma, far advanced, was found. There were large masses in the axilla and in the supra and infraclavicular spaces. No operation was possible, the patient dying June 10, 1880, from sepsis. There was no autopsy. Her family history was of interest. Her father, aged 73, had recently died from an extensive and long-standing epithelioma of the lip and face, and which had involved the glands of the neck. A paternal uncle died at the age of 56, with some form of malignant disease of the foot. Her mother, aged 70, was in good health and gave a good family history, but later died from some kidney complication.

Some time after Miss J.'s death her sister, aged 53, noticed a tumor in her left breast. It was plainly a movable, acute carcinoma, without axillary complications. An immediate operation was advised and agreed to. The operation

was very thorough, extending far up in the axilla, but not removing the pectoral muscle. She remained well for about fifteen months, when a few nodules appeared in the cicatrix, which ulcerated, giving her little annoyance, but within a short time she died from metastases of the liver and stomach. No autopsy was held. Examination of the tumor removed classed it as an acute scirrhus.

In May, 1889, he saw another sister, aged 50, married, mother of one child. She had a tumor in her left breast, associated with sharp, lancinating pains, retraction of the nipple, and all the symptoms which she had noticed in her sisters' cases. She was operated on and remained well until January, 1903, when she had marked abdominal pain. On examination it was evident she was suffering from an ovarian cyst. At operation a multilocular cyst was found connected with the left ovary. Pathologic examination of the tumor demonstrated it to be an ovarian cyst with secondary papillomatous and carcinomatous degeneration. In May, 1904, she began to suffer with severe abdominal pain; abdomen tender to touch, and some slight nausea. Incision revealed a large cyst connected with the right ovary. This was aspirated, but the cyst wall was found so thoroughly adherent to the surrounding tissues, including appendix, head of cecum, and small intestines, that it was found impossible to remove it entirely. The greater portion was excised and laboratory examination revealed the same general characteristics as the previous tumor of the left ovary. She was improved after this, being quite comfortable until within two weeks of her death, October, 1904. There was no autopsy, but every evidence of the mesenteric glands and stomach being involved. The breast scar showed no return of the growth and in every way she had enjoyed perfect use of her arm.

In April, 1897, he saw this lady's husband, aged 56. He had an enlargement of the right testicle, sarcomatous in character. A thorough operation was done for removal of the diseased organ, and he remained well for years. There was no return of growth in cicatrix, nor metastasis, as shown at the autopsy. He died in May, 1900, of arteriosclerosis and great dilation of heart.

In September, 1897, he saw the third sister, aged 51, and mother of six children. She called his attention to a sore she had noticed under right breast, in the flexure of the skin, which had existed for several months. It had all the appearance of a true epithelioma. She begged not to have the knife used and he treated it with Vienna caustic and arsenious acid paste. The ulcer healed kindly and remained well, she passing her menopause without any growths appearing elsewhere. From May, 1903, he had this same patient under observation for prolapse of the uterus, second degree, with a constant leucorrheal discharge, occasionally tinged with blood. He made a number of careful examinations and was unable to locate any malignant growths. Under the use of douches and the wearing of a rubber ring pessary she was made very comfortable. October, 1905, she noticed a small tumor in the left breast. He kept close watch of the growth, and in January, 1906, insisted on an immediate operation. She was now 60 years of age. He did a thorough dilatation and curettement of the uterus, repair of perineum, removed several hemorrhoids, and while under ether made a complete examination of the pelvis and abdomen. There was no abnormal condition present. He then removed the left breast and contents of axilla. Microscopic examination showed the case to be one of carcinoma of the breast, with metastasis to lymphnodes; chronic endocervicitis, with papillomatous proliferation of surface epithelium. Patient made a good recovery.

In May, 1896, the daughter of the third sister met with a severe accident, accompanied with concussion of the brain. She, however, made a good recovery. Later she passed through a severe attack of typhoid fever. Not long after her convalescence she developed epileptic seizures, at times very serious, then better. She lingered some years, and died May 15, 1900, with marked symptoms of tumor of the brain. The case was considered to be one of sarcoma of the brain.

In the study of these cases the thought of house infection is to be considered. The first two sisters were born in the house where the uncle passed much of his time, when suffering from malignant growth of the foot. The last two were born in the house and lived where the father was attacked with epithelioma of the lip and face, and was ill for a long time. It is somewhat interesting to note that of the four sisters it was the left breast implicated in each case.

Some Experiences in Intracranial Surgery.

MR. CHARLES A. BALLANCE, London England, said that surgical intervention is, at present, the only remedy for certain intracranial diseases, but only too generally the same apathy prevails in adopting this remedy. Prominent among the obstacles to successful operation for intracranial disease, and particularly for brain tumor, is the difficulty of making a precise diagnosis at an early stage of the disease. Another point of practical interest is that a highly cellular tumor of the brain is not necessarily very malignant. This is true not of brain tumors only, but of tumors of other parts of the body; thus a large cellular *carcinoma mammæ* may prove less malignant than a small atrophic scirrhus with few cellular elements. In 1903 he drained a large gliomatous cyst in the left frontal lobe of a man under the care of Sir William Gowers. The symptoms were relieved, but recurred two years later. He then removed a large mass of tumor from the same region. The patient left the hospital well and proposed to resume his work. In 1889 he removed a tumor from the cerebellum of a child, aged 3½ years. The main localizing sign was a bulging occipital fossa. Last year a boy, 6½ years, was admitted to his ward with signs of cerebellar tumor. The right cerebellar region was slightly more prominent. This sign, anatomical in this case, led to exploration on the wrong side. The symptoms were paroxysmal headache, vomiting and cerebellar gait; unsteadiness in standing, but without marked tendency to fall to one side more than to the other; deviation to the right in walking and in running; inco-ordination of limbs to an equal extent on the two sides; optic neuritis on both sides, most marked on the left. The attitude of the head was that described by Batten as corresponding to left cerebellar tumor. The cyst was drained at a second operation, but the child did not survive. Male, aged 4 years and 10 months. Left occipital fossa bulged considerably. Inco-ordination of left upper limb. Large tuberculous tumor removed. Child is now well. Female, aged 7 years and 10 months. No bulging of occipital region. No regional diagnosis possible. Right cerebellar region first explored; then left. Large tuberculous tumor removed. Patient made good progress for three months. Death then occurred suddenly from hemorrhage, possible scorbutic in origin, tearing up the whole left cerebral hemisphere. In 1894 he removed an encapsulated fibrosarcoma from the right cerebellar fossa of a woman, aged 49 years, and she is alive and well.

Abscess in the brain should be treated like an abscess elsewhere. In most cases of slowly spreading infection from chronic disease adhesions occur at the site of infection, binding together dura, arachnoid, pia and cortex. In the case of subdural hematoceles, satisfactory results are obtained by removing such cysts. In one case of his a cyst 7 by 4½ by 1½ inches, was successfully removed. He has seen three other cases. In meningitis serosa the withdrawal of fluid may prevent the meningitis going on to suppuration.

There are two methods of dealing with hydrocephalus. (1), Intradural drainage. This can be carried out through the lateral angle of the anterior fontanelle, or the descending cornu of the lateral ventricle on the right side may be opened by the method of Keen. A fine tube, bent at right angle, made of gold and iridium, or of pure platinum, should be used. (2), Ligature of both carotids. The secretion of fluid may be lessened by ligature of one or both common carotid arteries. This can safely be done in hydrocephalic infants, in whom the blood supply to the brain stem is of much more relative importance than that to the cerebral substance and the choroid plexus.

A Year's Experience in Intestinal Surgery.

DR. JOHN B. DEAVER, Philadelphia, Pa., said that his cases comprise 12 simple enteroenterostomies; 11 intestinal resections, with enteroenterostomy; one enterotomy; two colostomies; 7 enterorrhaphies for various forms of fecal fistula; one suture of a typhoid perforation; one reduction by manipulation of an intussusception; and 8 instances in which strangu-

lating bands or adhesions were divided, besides three other (atypical) operations—a total of 46 operations on 40 patients.

There are 13 cases of intestinal carcinoma, all in the large bowel. The cecum was dissected in 4 cases, the hepatic flexure of the colon in 2, and there was one case each in which the part affected was the transverse colon, the splenic flexure of the colon, and the rectum; while there were 4 patients in whom the sigmoid was the seat of malignant disease. Five of these 13 patients died—those patients in whom the splenic flexure and the rectum was involved; one of those with the cecum affected, and two of those in whom the sigmoid flexure was diseased. The remaining eight patients recovered from the primary operation and were relieved temporarily, but of the four successful cases in which the patients were seen sufficiently early for a radical operation to be done, two developed symptoms of recurrence about eight months later, and were again temporarily relieved by further operation; and in the case of two others, on whom a radical operation was done, sufficient time has not elapsed since the operation to permit of their being considered in this connection.

Treatment of Congenital Dislocation of the Hip.

DR. E. H. BRADFORD, Boston, said that in a large number of cases of congenital dislocation of the hip, complete cure can be accomplished by manipulative reduction. In difficult cases efficient mechanical reduction is of assistance. In certain cases, owing to a distorted capsule, the femoral head is not placed deep in the acetabulum, or is kept from the bottom of the acetabulum by a capsular fold, and relapse takes place. Under these circumstances the surgeon can, by incision of the capsule, widen the capsular constriction, place the capsular flaps around the head and neck, secure the head of the femur until cicatrization has formed a retaining capsule about the reduced head. In a relaxed capsule much depends on the after-treatment. If the capsule is loose, the head will drop out if not held in place, until the tissues have become reformed, so that they hold the head firmly. A certain number of relapses are due to this. The head should be placed well in the socket and kept there until it is firm in its improved position and not kept long enough in a distorted position for the tissues to become too stiff or non-elastic. If the head is not properly reduced, it is inadvisable to postpone attempts at other measures of relief, i. e., incision or a repeated manipulation.

Open Treatment of Fractures.

DR. EDWARD MARTIN, Philadelphia, said that the wounds necessitated by the open treatment of fracture are more prone to suppurate than are those made in the performance of other operations, partly because foreign bodies, often of considerable size, are buried in the wound, but mainly because as a result of prolonged manipulation and rough handling and the use of tools ill adapted to the purpose, there is left at the end of operation a large amount of tissue so hopelessly devitalized that an abundant culture material is provided for even the slight infection which inevitably takes place during the course of the most carefully conducted operation. Of the many ingenious devices employed for permanently fixing broken bone ends in their proper relation to each other, chromicized catgut, wire, screws and silver plates are the most serviceable. If the surgeon could be assured of a perfectly sterile No. 3 catgut so largely deprived of chromic acid as not to prove irritating to the tissues, this would be the material of choice in all cases where suture or encircling ligature is applicable.

Screws are extremely serviceable in that they represent foreign bodies of moderate size, are readily applied, and will often hold bones in perfect apposition. They are especially applicable to the repair of oblique fractures of long bones. In fractures of the extremities of these bones the cancellous tissue gives a grip so feeble as to make their use of little service unless driven through and through. The proper application of a screw implies the selection of an almost cylindrical instrument with a deep thread cut clear to the head, and of such length as to pass completely through the bone at right angles to the line of fracture, but not beyond. The easy application of the screw is dependent on the proper selection of a drill and the use of a clamp so devised that the bones having been placed in accurate apposition are immovably held while the drill is being used and the screws are being driven home. The drill should be of such size that it bores a hole through both fragments the full length of the screw, and of a diameter slightly greater than its core. When but one of the two fragments is adequately drilled, as the screw is driven in it pushes the bones apart in place of bringing them together. The same result follows after having used the drill to a proper depth when the relation of the fragments to each other is changed; this frequently happens when the bones are loosely held in the bottom of the wound by the fingers of an assistant. This should be obviated by the use of bone clamps which should be powerful enough to hold the largest bone in their grasp. The drilling should be done either by an electric or foot engine. When wire or gut is to be passed through drill holes, the instrument should be provided with an eye near its cutting end, through which, when it has been driven completely through the bone, can be passed a guiding thread. McCurdy accomplishes the same purpose by a notch placed just above the end of the instrument.

The silver plate finds its most useful application in transverse fractures. Its proper fitting is made easy by the use of grasping instruments which not only hold the two bones in accurate apposition, but also secure the plate firmly in place while the holes are being bored and the screws applied. The starting of the screws in the drill holes, particularly in the treatment of broken small bones, such as the ulna, clavicle or fibula, or when the fragments to be held in apposition lie at the bottom of a deep wound is greatly facilitated by a screw-driver which firmly holds in a jaw devised for the purpose the screw until it is fixed in its drill hole. The open treatment of simple fracture should not be regarded as an emergency operation, and considering the fact that nine out of every ten adults who sustain a fracture of the shaft of the femur exhibit as a result of conservative treatment permanent deformity and crippling, it would seem desirable to practice formal operation more frequently than is now done.

Thyroidectomy, Partial and Complete.

DR. FRANCIS J. SHEPHERD, Montreal, said that the first 25 cases he operated on he employed the method of Socin, viz., enucleation; but, meeting with two severe cases of secondary hemorrhage, he gave up this method in the larger tumors for excision. Only once in about 100 operations has he wounded the laryngeal nerve. The indications for operation in simple goiter are as follows: (1) Progressively increasing size of the tumor; (2) rapid growth, with dyspnea; (3) narrowing of the trachea; (4) difficulty in swallowing; (5) alteration of the voice; (6) tachycardia and increasing nervousness; (7) inconvenience and deformity due to the size of the tumor.

As regards anesthesia, Dr. Shepherd stated that he always uses general anesthesia. He uses equal parts of ether and chloroform. So far he has had no death and no alarming symptoms. He has operated in seven malignant cases with one permanent recovery. He has had no deaths in simple goiters, though he has had two following operation in exophthalmic goiter. He prefers the straight incision internal to the sterno-mastoid, and he ties the superior thyroid before turning out the gland; then the inferior thyroid and recurrent nerve are looked for and identified. After operation he uses a drainage tube for twenty-four hours; sometimes if there has been much oozing he packs with iodoform gauze. Iligh temperature occurs after operation in 60 to 80 per cent. He has seen only one case of myxedema following extirpation of the gland, and this was in a case of malignant disease. In only one case had tracheotomy to be performed.

New Method of Utilizing Sac in Radical Cure of Hernia.

DR. ROSWELL PARK, Buffalo, described the method as follows, especially with inguinal hernia: To isolate the sac, then to empty it and to clean it of all superficial fat. It is thus separated from the cord and made to appear as a distinct, separate structure up to the level of the internal ring. His usual procedure for many years has been to penetrate the abdominal aponeurosis with forceps at a point opposite the internal ring. The forceps introduced through this opening is made to appear lower in the inguinal canal and here to seize the sac, and in the act of withdrawal pull it after it and thus

bring it out at the punctured point. Instead of cutting off the sac outside the point where it is fastened, he utilizes it as a band of suture material, with which a coarse but strong suture is made, binding together the lateral margins of the inguinal canal. Of course, much will depend on the thickness and length of the sac. Old and large sacs will be far too cumbersome for this purpose, and short sacs will be too short to serve as sutures when twisted into a cord. These difficulties are easily overcome by either reducing the sac, cutting out a strip which can be used for the purpose in one case, or in the other lengthening it by division, by which a sac two inches long can be so divided as to furnish a cord five or six inches in length.

Having prepared the sac, or so much of it as is needed for the purpose, it may be now used in two or three ways. One may thread it into the eye of a very large needle, or one may use a Cleveland ligature carrier, passing it through the tissues on either side as if it were an ordinary needle, then grasping the end of the sac and pulling it back through the openings thus made as the instrument is withdrawn. Sometimes he has passed into the end of the sac a silk suture, threading it into the larger needle and making it serve as a means of traction, the procedure varying a little with the density and strength of the sac wall. Again, in certain cases that portion utilized may be divided into two halves, making two tapes, which can be used for making a shoelace suture of the pillars of the ring by either of the expedients just mentioned. When the ends are drawn down at the lower end of the ring they may be tied and fastened with a suture.

The method can not be applied to all cases and can never be expected to always displace other procedures, nor should one ever think of adopting it when he is not operating deliberately and in the absence of all infectious processes.

Use of Thyroid Extract to Shorten Coagulation Time of Blood.

DR. WILLIAM J. TAYLOR, Philadelphia, advised that it be used in cases of hemophiliacs where surgical operation is demanded, or where they have received any accidental wound, and also in patients whose blood has been altered by disease. Normal blood is not affected in any way by the use of thyroid extract, even where its use has produced distinct constitutional effects. He cited three cases of bleeders in which thyroid extract was used with marked benefit, and mentioned one instance in which it was used in a case of profound jaundice due to obstruction of the hepatic duct. He recommends that in all cases of suspected or probably delayed coagulation time the blood should be tested carefully and dried thyroid extract given in three-grain doses, in capsules, three times a day. It has been used with very great effect in several cases of purpura with spongy and bleeding gums, occurring during the course of typhoid.

(To be continued.)

ST. LOUIS MEDICAL SOCIETY OF MISSOURI.

Regular Meeting, held May 26, 1906.

Diseases of the Biliary Passages.

DR. MAURICE H. RICHARDSON, Boston, said that little is known of the diagnosis of gallstones in their earlier manifestations, or of the diagnosis of stones of atypical or unusual form. The symptoms of gallstones, he said, are well-defined when there is a passage of gallstones out of the bladder, producing "colic." This is pathognomonic, especially if the passage of the stone is slow enough to cause jaundice. Pain in the gall bladder simulates pain in the gall duct only when the pain lasts a long time. In the earlier forms of gallstone disease, before the stone has made its way into the ducts or duodenum, the symptoms are trivial and not understood. Later, when the irritation of the gall bladder mucous membrane ensues, with ulceration, thickening of the walls of the bladder, etc., there is a regular sequence of events. There is a great variation, however, in the way in which impaction of stones is felt. In many cases in which gallstones are found in the cystic duct and common duct, there is no history of pain and other symptoms. The wide variation which has been found in many cases shows that the history should have been taken more carefully and the diagnosis could then have been made. All symptoms in the right hychondrium are suggestive of gallstones. Because the patients do not complain of excruciating pain it by no means follows that there is no stone present. Dr. Richardson is convinced that all gallstones produce symptoms from their beginning until their final passage. The profession should be impressed, he said, with the difference between the slight danger of removing gallstones in their early formation and the great danger of removing them in their later manifestations when there has been thickening of the gall bladder, or ulceration or impaction in the ducts.

For all practical purposes it can be said that the nidus of gallstones is in the gall bladder, and that a micro-organism of some kind is usually the cause. Between the time of the aggregation of the crystals making up the gallstone and its final passage, there must necessarily ensue a long period of time. If the gallstones are found many years after typhoid, and if one accepts the thought that the typhoid bacillus acts as the nucleus of the stone, then the life history of the stone might be said to date from the attack of typhoid. The size of the stone is not a thing by which to judge its age; the consistency is more important. Symptoms referable to the gall bladder do not always mean the presence of gallstones. In some cases inspissated bile will cause symptoms in this region. Symptoms are accounted for in some cases by other conditions, i. e., malignant disease of the intestines, with gallstones impacted in the duct. Occasional pains accompanying intestinal peristalsis should be suggestive of gallstones. Stones too large to pass the cystic duct may give rise to a suspicion of their existence by causing cholecystitis. In many cases the stone fills the entire gall bladder. Gallstones firmly grasped by the lower fibers of the gall bladder may give rise to intermittent colicky pains. The very early symptoms of gallstones are usually described as "indigestion," gastralgia, with no jaundice. The most that can be said about this symptom is that it is a kind of discomfort. The pain is the most constant symptom of stone, either a spasm or the consciousness of a discomfort in the right hypochondrium or in the left hypochondrium for which the patient seeks some relief by means of some simple remedy. The pains of gallstones might be said to come with a "regular irregularity," or rather with an "irregular regularity." If on top of the history of discomfort there is a history of spasmodic pain at times, and rise of temperature indicating infection in the gall bladder, then the suspicion of the existence of gallstones is strong indeed. In many instances the surgeon finds stones impacted in the cystic or common ducts. The error in not noting jaundice in such cases has been said to be explicable on the ground that the stone passes quickly into the duodenum, without stopping the flow of bile. A careful search of the stools without finding a stone is a flimsy means of basing a diagnosis of no stone in the gall ducts. When pain comes on in paroxysms, whether there is jaundice or not, there is a suggestion of gallstone.

Pain is the most important point, and the cause of the pain in cases in which the gallstone is found in the gall bladder is muscular spasm. When the stone passes to the duodenum, there is pain with or without jaundice. The fact that the bile is completely obstructed is not the cause of pain, because total obstruction of bile is found in malignant disease of the biliary passages, without pain. When the stone is impacted, the symptoms will be similar to those already suffered, due to the efforts of the muscular fibers to push the stone along. In case there is infection in connection with a thickened gall bladder, this must have something to do with the pain. Occasionally there is necrosis of the gall bladder with perforation into the alimentary canal. In such cases of giving way of the gall bladder walls there may be the pain of a beginning peritonitis. The less severe are the symptoms the less imperative are the indications for operation, and when the indications of their existence are severe, then the necessity for operation is urgent.

DISCUSSION.

DR. N. B. CARSON thought that the discussion belonged more to the medical man than to the surgeon, because most of these cases are first seen by the medical man and after the diagnosis is made, the surgeon undertakes to give treatment and to con-

firm the diagnosis. There is a tendency on the part of the surgeon to trust too much to the medical man for a diagnosis and in this tendency there is a trend toward mechanical work by the surgeon. Many of these cases present symptoms of stomach trouble. Recently Dr. Carson operated on a woman from whom he removed 146 gallstones from the gall bladder. She gave very little indication of the presence of this mass of gallstones. In another case the gall bladder was tightly packed with gallstones, and the patient's history was simply occasional attacks of "stomach trouble," until a short time before presenting her self at the hospital when she became jaundiced.

DR. W. E. FISCHEL said that the symptoms of which Dr. Richardson spoke as indicating the presence of gallstones in the bladder or ducts can often be accounted for by a disturbance of the alimentary tract. Fischel said that he has not yet learned to distinguish between the pains of a frequently recurring gastric indigestion and the pain of a stone in the gall bladder. The fact that so frequently there is found recurrence of jaundice does not indicate that there is danger of the presence of stone in the gall bladder. He emphasized the fact that it would be a dangerous practice indeed for the internist, after he has exhausted every means in his power to diagnosticate a condition in the upper right quadrant of the abdomen, to send all such patients to the surgeon for operation.

DR. H. TUHOLSKI agreed that in most cases that are sent to the surgeon by the internist the diagnosis is already made, but that he questioned whether it is right to yield the palm of diagnostic skill to the internal man. Many people have gallstone disease without characteristic symptoms. The difficulty is in making a diagnosis of some change in the biliary passages requiring operative interference. The diagnosis of cholecystitis is just as imperative as if gallstone were added to it. The surgeon makes the mistake of thinking that if when a case is referred to him he does not make a diagnosis immediately the patient is liable to slip from his hands to another surgeon. The speaker argued that the surgeon should have plenty of time to make his diagnosis, keeping the case under his observation for weeks, if necessary. If this could be done, the surgeon would make a correct diagnosis in most instances.

The pain has certain characteristics in gallstone disease, especially the pain which the patient feels after the acute attack of colic is over. There is a peculiar feeling of discomfort two or three inches below the scapula, a feeling quite "uncanny." The surgeon is handicapped by not seeing the patient during the acute attack. After the diagnosis is made, the surgeon should not hesitate to operate. The fact that many patients get over their attacks after going to Carlsbad does not mean that they have been cured of this disease. There has simply been a cessation of the catarrhal condition in the gall bladder. Some such patients are really helped so much by drinking Carlsbad water that they are cured and pass their gallstones. Dr. Tuholski has made it a habit of examining the gall bladder in all cases in which he opens the abdomen. One patient must have been cured by the Carlsbad treatment, because, after opening the abdomen later for the extirpation of fibroids of the uterus, he passed his hand up to the gall bladder and found no stones.

DR. W. G. MOORE said that if a patient was able to go to Carlsbad he would send him there. He does not think there is any remedy for gallstone disease except an operative procedure. He liked Dr. Carson's suggestion that the surgeon relies too much on the medical man to make his diagnosis because the medical man usually makes a diagnosis for the surgeon with which the surgeon agrees before the operation and disagrees after the operation.

Vaginal Method of Gynecology.

PROF. DR. DÜHRSSEN, Berlin, gave a description of his method of performing gynecologic operations through the vagina by his anterior incision method. He said that the main objection raised against his method is that one cannot see the operative field, but he maintained that one can see everything if the proper instruments are used. The mortality with this method is strikingly low compared to that from operations by the abdominal route. In 1600 cases he had a mortality of less than 2 per cent., and even this mortality was due to the fact that these were bad cases of extrauterine pregnancy or of large fibroids of the uterus. The use of the method for operating on large fibroids is attended with the worst results because of the large area exposed in the operation, especially when there is a following pregnancy. After these operations by the vaginal route there is not so much pain as after the abdominal method. Patients are walking four weeks after the operation. He mentioned the prejudice against this operation on the part of American surgeons, who claim that they can not see what they are doing, yet the first vaginal hysterectomy was performed by an American, Thomas. He said that operating posteriorly through the cul-de-sac is bad surgery because asepsis is not so good and because forcible traction must be made, with consequent danger of tearing the pedicle. In the anterior operation, there is no such traction. The uterus can be pulled out with the finger. The appendages are easily within reach through the anterior operation.

DISCUSSION.

DR. GEO. GELLHORN said that it is a fact that there is less shock, as a rule, in operating by the vaginal route than by the abdominal. It is also a fact that vaginal operations are attended by less danger of infection than are those performed by the abdominal route. Dr. Richardson had said in a previous paper that there is always an element of danger in opening the abdomen. Dr. Gellhorn thinks this danger is minimized if the approach to the pelvic organs is made through the vagina. If every step of the operation can not be seen, there is either faulty technic or insufficient vaginal instruments. The instruments the ordinary operator usually uses in vaginal work are those designed for abdominal surgery; the objection to them is that they are not long enough to permit the operator to gain easy access. Another more important objection is that in vaginal operations one is not able to operate on the appendix or on the gall bladder. If this is done, there will be found many cases in which there is no disease of the appendix or gall bladder. If this is true, then the vaginal route can be used. If there are symptoms of appendicitis or gallstone, then the abdominal route can be used.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Enuresis.

Percy G. Lewis, in the *British Medical Journal*, states that when undertaking the treatment of a case of enuresis it should be ascertained first whether the case is simply a general want of tone; second, whether or not intestinal asepsis is a prominent feature, and if so is the urine passed at night abnormally acid and diminished in quantity, or is it of low specific gravity, alkaline or neutral, and increased in quantity; third, whether the case is simply one of habit remaining after the cause has been removed, or after improvement in the general health has become such that enuresis need not occur. In dealing with these cases the author states that failure along one line of treatment will soon be followed by success in other lines. In the first of these classes, when the patients do not look ill, and also in those cases in which anemia is present without evidence of intestinal disturbance, tonics are indicated. Any good tonic, according to the author, will lead to a cure. The phosphate of iron or the perchlorid of iron or strychnin, as advised by some authorities, will tend to improve the health, and these should be accompanied by cold douches, massage, or plenty of exercise in the country, change of air, and other things which will improve the general health and tone of the patient. The practice of taking the child up several times during the night, as he states it, is a very convenient method of protecting the bed, but is in no wise a means of cure. In the second class which he mentions evidences of indigestion are

to be found, and the causes which tend to produce sepsis from the intestinal canal should be searched for and removed if at all possible. It is this class of cases which can be so easily dealt with and cured by means of proper diet. In the acid form, when the urine shows such a decided reaction, the elimination of meat alone from the diet may lead to a cure, and in the alkaline form the use of non-farinaceous diet is not infrequently productive of good results. A good routine treatment, according to Lewis, consists in securing a daily evacuation of the bowels by giving calomel in ¼-grain doses every night, followed by a mild saline laxative in the morning. In addition to this treatment, one or more of the many so-called intestinal antiseptics may be administered. In the third class, sources of irritation must be looked for and corrected, if possible. Such sources of irritation may be intestinal worms, anal fissure, adherent prepuce, etc. Other surgical methods, such as blistering the sacrum, freely cauterizing the urethra, the passage of large metal bougies, and the various methods of treatment by electricity are, in the opinion of the author, more or less psychical in character, or they, by producing less profound sleep, frequently break the habit of enuresis.

In speaking of the former methods of treatment he states that the limitation of the amount of fluid drunk rather tends to aggravate than to relieve the symptom by adding to the digestive disturbance. Belladonna in small doses may act as a tonic to the nervous system and, consequently, may be of value in the first class of cases. When given in semi-poisonous doses this preparation acts chiefly on the mind, and tends to divert the attention of the patient. Others are of the opinion that it acts by making sleep less profound, so that complete loss of control of the sphincter muscle does not take place. In this connection belladonna in association with strychnin is recommended in some cases as of great value. Jacobi states in this connection also that belladonna is useful only when vesical catarrh is present. Chloral and bromid, as sedatives, are of value by blunting the nervous mechanism of micturition, but in no way reach the cause of the disease, and consequently their employment is not placed on a scientific basis.

Thursfield states that in the treatment of enuresis two points require emphasis. The first is that in order to insure success prolonged treatment is necessary, as the condition has been allowed to become a habit before treatment has begun, and it requires time to break the force of this acquired tendency, and although success in these cases may be obtained for a time rather quickly, a relapse is extremely frequent unless the treatment is continued. In the second place, the necessity of varying the surroundings of the patient should be considered. Some patients will derive no benefit whatever from the treatment so long as they continue their ordinary mode of life, but improve instantly with new surroundings and different environments.

Another point of importance, according to Thursfield, is avoidance of those articles of food or drink which have an irritative or diuretic effect. Tea and coffee are to be absolutely prohibited. Sugar in all its forms must be eliminated from the diet. On the other hand, the child should be permitted to drink water or milk as desired, provided it be taken at regular times and limited in quantity at the last meal.

In nervous, excitable children school work should be discontinued for a time, if practicable.

The author states that although he has employed a large variety of drugs in the treatment of this disease, he has found three only to be of value, and of these three belladonna or atropin is by far the most successful. This preparation may be given in the form of the extract or the tincture or as liquor atropinæ, as desired. He recommends 10 minims (.65) of the tincture three times a day as the initial dose, and raises the dose week by week up to 60 minims (4.00) three times a day. At this period it is essential not to abandon the drug but slowly to diminish the dose until it can safely be dispensed with. This may require a period of from three to six months, before permanent relief is obtained. He states in this connection that the danger of poisoning is very slight. Although he has employed this drug in a great many cases, in one only has he noticed delirium, although the loss of accommodation is nearly always present in the beginning. This condition, however, soon passes off and is not an indication for relaxing the use of the drug. Dryness of the throat and mouth and the smarting sensation in the pharynx may be complained of at times, but are only temporary in character. He recommends potassium citrate in conjunction with the belladonna in the majority of cases, especially when hyperacidity of the urine is present. The third preparation which he recommends is urotropin (hexamethylenamin), and this is especially indicated in cases of bacteriuria. This should be given well diluted, for in concentrated solution it has been known to produce hematuria and painful micturition. He states that his experience does not favor the use of ergot, antipyrin, rhus aromatica, lycopodium, etc. In cases in which the children are subjects of night terrors, he recommends a small dose of potassium bromid at bedtime, and in poorly nourished, anemic children, iron and strychnin are recommended as tonics.

Lumbago.

In considering the treatment of lumbago, J. J. Levy, in the *New York Medical Journal*, states that there are two varieties of lumbago, namely, the acute and chronic. In the treatment of the acute cases he recommends dry cupping applied to the lumbar region, and states that he can not understand why this method of treatment is not more frequently employed, as the results following its use guarantee it. In connection with this treatment, Levy gives the following combination internally:

B. Potassii acetatis	℥iv	15
Sodii salicylatis	℥iii	12
Aquæ gaultheriæ q. s. ad	℥iii	90

M. Ft. solutio. Sig.: One teaspoonful in a glass of water every four hours.

The following local application is recommended:

B. Methyl salicylatis	℥i	30
Spiritus chloroformi	℥ss	15
Linimenti saponis q. s. ad	℥iii	90

M. Ft. linimentum. Sig.: To be rubbed in thoroughly for ten minutes, night and morning, over the affected region.

One will find the treatment of chronic cases much more difficult, as medicinal preparations have comparatively little influence. It is in this class of cases that physical remedies are of value. Rational massage and scientific hydrotherapy are very serviceable, even in the most obstinate cases. He recommends the following plan of treatment: The patient is instructed to take hot air or vapor baths, or hot tub baths (105 F.), followed by hot blanket pack twice a week. The local shock douche, as he speaks of it, should be employed, and this consists in alternate sponging of the affected part with hot (120 F.) and cold water (50 F.), or, better, alternating the hot and cold water thrown from pails against the lumbar region. In this way a most profound local effect is produced and a rapid reaction is brought about, as these shock douches improve the nutrition of the lumbar muscles and should be given every day. General massage and hot fomentations applied to the lumbar region are of great value. If these compresses are thoroughly wrung out, and if the lumbar region is oiled with petrolatum, there is practically no danger of burning the patient. As to the diet, he recommends that alcoholic drinks, excess of meat, tea or coffee should be excluded. Sodium phosphate is recommended in tablespoonful doses one hour before breakfast, in order to keep up proper eliminations from the gastrointestinal tract. Patients should be instructed to wear woolen underwear winter and summer.

Holdridge, in the same periodical, recommends the following mixture in the treatment of this condition:

B. Menthol	℥ss	15
Olei gaultheriæ		
Ceri albi, ää	℥i	30
Ceri flavi	℥ss	15
Lanolini		
Liquidi petrolati, ää	℥i	30

M. Ft. unguentum. Sig.: Apply locally three times a day, followed by a brisk rubbing for five minutes.

The patient is then directed to lie on his abdomen. The back is covered by one or two thicknesses of a flannel blanket, and the back ironed with a laundry iron as hot as can be borne for ten minutes.

If the patient gives a rheumatic history, sodium salicylate should be administered in 15-grain doses (1.00) every three hours. The subacute and chronic cases demand more vigorous treatment, and in such cases Holdridge recommends that two or three cantharides blisters, one inch square, be applied over the affected part and permitted to remain for eight hours. The vesicles should then be opened and an antiseptic dressing applied with a bandage about seven inches wide, drawn firmly around the body. In long standing cases he states that internal treatment is of no value. Galvanism, the positive pole over the affected region, is of service, and massage should be given once daily, or as indicated in the individual case.

Medicolegal

Damages for Death of Dentist.

The Second Appellate Division of the Supreme Court of New York affirms, in the case of Morhard vs. Richmond Light and Railroad Co., a judgment for $40,000 damages for the death of a dentist. It says that it does not think this amount excessive, it appearing that the dentist was 37 years of age at the time of his death; that his income from his dental profession had been from $17,000 to $20,000 a year, and that he left three children, the eldest being 11 years of age, besides a posthumous child, born six months after his death.

Prescription Not Competent Evidence of Insanity.

The Supreme Court of Nebraska holds, in the case of Ames vs. Ames, that the fact that the attending physician prescribed certain drugs for a patient which are used in the treatment of mental disorders is not competent evidence tending to establish the insanity of the patient. Assuming that the prescription in some way indicated that the patient was under treatment for some disease which affected his mind, the Supreme Court commissioners say, it would merely reflect the opinion entertained by the prescribing physician, at the time the prescription was given, that the patient was suffering from such disease. If, instead of such prescription directed to a pharmacist, the physician had written a letter in which he expressed the opinion that the patient was insane, will it be claimed that such letter would be admissible in evidence on the question of the patient's sanity? The prescription certainly stands on no better footing.

Closes Sleepers to Persons with Contagious Diseases.

The Supreme Court of Alabama says, in Pullman Co. vs. Krauss, that the right of a person to a berth or passage on a sleeping-car is not an unlimited right. But it is subject to such reasonable regulation as the company had prescribed for the due accommodation of passengers and for the safety and comfort of passengers. Sleeping-car companies are not bound to admit persons as passengers on their cars who are guilty of gross and vulgar habits of conduct, or who make disturbances on board, and, by a stronger reason, persons who are afflicted with contagious or infectious disease, so that there would be a probability of other passengers contracting the disease with which said afflicted person was suffering. In this case, after proving that it had rules with reference to persons afflicted with contagious or infectious disease, the company offered in evidence this rule: "Persons known to be afflicted with any contagious or infectious disease, or to be insane, will not be permitted in the cars of this company." This rule, it would seem, the court says, was adopted for the safety and comfort of the company's patrons or passengers, and, whether the company is to be treated as a common carrier or otherwise, the rule is a wise and salutary one, and the court has no difficulty in reaching the conclusion that it is a reasonable one, and that the lower court should have so declared.

Admissible Aid to Memory of Medical Witness.

The Supreme Judicial Court of Massachusetts says, in Holden vs. Prudential Life Insurance Company of America, an action on a policy of life insurance where the company claimed that the policy was procured by fraud practiced on it in regard to the risk, that the company called a medical witness who had examined the insured for another company a long time before the policy in the suit was issued, and had written out his statements at the time of the examination. The witness testified that he had no recollection of the circumstances of the examination, and that seeing and examining the application then made did not refresh his memory in any way, although he could state that he then knew that the statements written in the application were true when made by him. The writing containing the statements was excluded, and the witness was not permitted to use it to refresh his memory. The writing was plainly inadmissible, but what the witness said of it was enough to justify him in using it to aid him in testifying. With the aid of the paper he could testify with absolute certainty what statements were made by the assured at the examination. The tendency of recent decisions has been to enlarge the use of entries in writing, made by a witness, as a memorandum, to aid him in testifying. In this case the witness may not have been quite accurate in saying that the paper did not refresh his recollection in any way, while he was doubtless correct, in the sense that it did not bring back to his recollection the circumstances of the particular occasion. The court is of the opinion that he should have been permitted to testify of the matters stated in the writing, using it as an aid to his memory.

Requisites to Law Authorizing Revocation of License.

The Supreme Court of California says, in the case of Hewitt vs. Board of Medical Examiners of the state, that legislation of the character embraced within the general scope of the act of 1901 for the regulation of the practice of medicine and surgery and for the appointment of a board of medical examiners in the matter of such regulation, in so far as it provides for the revocation of the certificate of a physician, is sustained on the ground that the legislature has authority under its general police power to provide all reasonable regulations that may be necessary affecting the public health, safety or morals, and with this object in view to provide for the dismissal from the medical profession of all persons whose principles, practices and character render them unfit to remain in it. As the duty of determining whether such professional or moral unfitness exists must necessarily be vested in somebody other than the legislature, it is usually committed by appropriate legislation to boards composed of men learned in their profession. Such power, however, to revoke the license of a practitioner when conferred on a board must be under provisions of law which are reasonable, must apply to matters of conduct on the part of the practitioner which affect the health, morals or safety of the community, and the acts or conduct which shall render him liable to the penalty of forfeiture of his right to practice his profession must be declared with such certainty and definiteness in the act that he may know exactly what they are. The right to practice medicine is, like the right to practice any other profession, a valuable property right, in which, under the Constitution and laws of the state, one is entitled to be protected and secured. And so the court holds void the provision in the act of 1901 authorizing the board of medical examiners to revoke the certificate of a physician for "grossly improbable statements" in an advertisement of medical business. It says that the right which a person possesses under the Constitution and laws to practice his profession as a physician and surgeon can not be made to depend on a provision of a statute as vague, uncertain and indefinite as this one. If a physician's license is to be revoked for "grossly improbable statements;" if he is to be thereby deprived of his means of livelihood, of his right to practice a profession which it has taken him years of study and a large expenditure of money to qualify himself for, on the ground that he has made "grossly improbable statements" in advertising his medical business—it is requisite that the statute authorizing such revocation define what shall constitute such statements so that the physician may know in advance the penalty he incurs in making them. It is an easy matter for the legislature to declare what statements in the advertisement of medical business shall be deemed "grossly improbable," and it must do so, and not leave it to a board of medical examiners after the publication is made to determine, in its judgment, whether the statements were or were not "grossly improbable," and according to its

particular view of the matter revoke or refuse to revoke the license. The right to practice medicine can not be made to depend on such a vague, uncertain and indefinite provision. The conclusion the court reaches as to the invalidity of this provision is, in its judgment, sustained by the general principles announced in the main and concurring opinions in ex-parte McNulty, 77 Cal. 164, and in Matthews vs. Murphy (Ky.), 63 S. W. Rep. 785.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

June 23.

1 Observations on Prostatectomy. L. R. Bangs, New York.
2 Feeding of Infants During the Hot Weather. I. L. Polozker, Detroit.
3 *The Diagnosis and Treatment of Ectopic Pregnancy. H. N. Vineberg, New York.
4 Treatment of Pneumonia. W. F. Waugh, Chicago.
5 *The Tuberculides, with Report of Cases Illustrating the Papulonecrotic Variety. M. B. Hartzell, Philadelphia.

3. Diagnosis and Treatment of Ectopic Pregnancy.—Vineberg bases his article on 53 operative cases. The ages of these patients varied from 22 to 41 years. Six had never been pregnant before. The author gives the three cardinal symptoms of ectopic pregnancy as amenorrhea, of longer or shorter duration, irregular uterine bleeding, and abdominal pain. Although the diagnosis of ectopic pregnancy is in some cases extremely difficult, in the vast majority of the cases the condition can be detected by the medical attendant if he will keep his mind alert. Vineberg does not approve of the practice of purposely leaving a large quantity of blood within the peritoneal cavity. He believes that some of these patients are lost on account of undue haste on the part of the operator. All bleeding should be arrested before the abdomen is closed.

5. The Tuberculides.—Hartzell speaks of the classification of cutaneous tuberculoses and considers these affections as belonging to two groups, bacillary tuberculides, in which the tubercle bacillus is regularly demonstrable, and toxi-tuberculides in which this organism can not be demonstrated. In the latter group the skin lesions are presumably due to toxins produced in foci, more or less distant from the seat of the eruption, and which reach the skin through the blood channels. The author cites the history of several cases of the so-called tuberculide, which is described in most recent textbooks under the name of folliclis. This affection is most common in children and adolescents. It is characterized by an eruption of small, dark-red or bluish nodules, generally most abundant on the backs of the hands, the elbows and knees, the feet and ankles, and the helix of the ear. In practically every case there is evidence of tuberculous infection. A more or less marked cyanosis of the extremities is almost invariably present. Drugs have little or no effect on the eruption.

New York Medical Journal.

June 23.

6 *Joint Diseases, Especially Those of Children. DeF. Willard, Philadelphia.
7 *The Irish Riviera. C. E. Nammack, New York.
8 *Atypical Clinical Features of Appendicitis. (To be concluded.) E. Eliot, Jr., New York.
9 Arteriosclerosis; Its Relation to Disease of the Nervous System and to Disorder of Its Function. (Concluded.) J. Collins, New York.
10 Dual Acute Otitic Cerebral Abscess, Operation, Recovery. C. Jackson, Pittsburg.
11 *Digitalis and Barium Chlorid. M. B. Lamela, New York.
12 Two Cases of Double Uterus. L. L. Rock, New York.
13 Bite of the Ombuta (*Clotho Arietans*, Gray) Treated with Potassium Permanganate. Recovery. F. C. Wellman, Angola, West Africa.

6. Joint Diseases of Children.—Willard reviews this subject in all its phases and summarizes it as follows: 1. Early diagnosis is the most important of all considerations. Physicians are responsible for a large majority of joint destructions, chiefly from carelessness or indifference in the examination of their patients. A child with any peculiarity of gait or carriage should be examined naked. 2. Every physician should abandon the thought that pain in a single joint in a child means rheumatism. A limp or peculiar gait with rigidity of periarticular muscles in a child always means some form of invasion, probably tuberculous, possibly septic. 3. An effort should be made to abort tuberculous infection by immediate absolute rest and fixation of the joint. 4. The patient should be kept out of doors, day and night, for a long period of time. 5. Wise conservatism consists in the prompt application of all methods of relief, whether hygienic, mechanical, or surgical. In children conservatism should be the rule, since youth has remarkable recuperative power. In adults, however, operative measures are much more frequently demanded. A limb that can readily be saved in a child, in the adult will demand amputation. If an operation will best accomplish a cure, such operation is true conservatism. 6. In septic cases following streptococcic, staphylococcic, pneumococcic, or gonococcic infection, the joint should be opened early and freely.

7. Irish Riviera.—Nammack recommends a trip to Ireland, around its southern and western coasts, lakes and mountains, as a suitable place for the over-worked business or professional man or woman to spend a vacation agreeably. He lays out a route and describes the points of interest, giving hints of value to travel.

8. Atypical Appendicitis.—Eliot reports a number of acute atypical cases of appendicitis in which there existed pathologic conditions entirely and completely out of proportion to the accompanying symptoms, and in which the appendix was the site of abscess formation or even gangrene, while the clinical picture was about that ordinarily observed in a catarrhal attack. The pulse was either normal or but slightly increased; in fact, the constitutional symptoms were such as not to direct attention to the appendix. In the cases cited, operation was prompted by the diffuse rigidity extending over the entire lower right quadrant of the abdomen. Eliot has found this to be, without exception, the most reliable and trustworthy guide in determining the desirability of an immediate operation, for in every instance in which this symptom existed operation disclosed a suppurative or gangrenous condition of the appendix of such a character that delay would have greatly jeopardized the chances of the patient's recovery. In the second class of cases reported, a mass was palpable, but no abscess was found. Still another class of cases of acute suppurative appendicitis resembled intestinal obstruction.

11. Digitalis and Barium Chlorid.—Lamela reports a case to prove that barium chlorid is capable of replacing digitalis without the accumulative danger of the latter nor its irritant action on the gastric intestinal mucosa.

Boston Medical and Surgical Journal.

June 21.

14 *How Progress Comes in Medicine. F. C. Shattuck, Boston.
15 Observation Hospital for Mental Disease. L. V. Briggs, Boston.
16 *Case of Multiple Ulcers of the Gall Bladder. E. A. Locke and S. B. Wolbach, Boston.
17 Apparatus for Local Application of Dry Cold and Heat. A. W. Baird, New York.
18 Case of Double Uvula in a Child. W. P. Cones, Boston.

14. See THE JOURNAL, A. M. A., June 9, 1906.

16. Multiple Ulcers of Gall Bladder.—Locke and Wolbach report the case of a woman, aged 56, who sought relief from painful varicose ulcerations on the anterior part of the right lower leg. The patient was examined carefully and a diagnosis was made of arteriosclerosis, myocarditis, chronic bronchitis, emphysema and varicose ulcers. About one month after her admission to the hospital there was a sudden onset of severe abdominal symptoms suggesting appendicitis. An operation was performed but nothing abnormal was found. The patient recovered promptly from the operation, but for several days subsequently there was persistent vomiting, which finally approached a fatal character, and a moderate watery offensive, and at times, bloody diarrhea. Peritonitis developed, finally a terminal lobar pneumonia, and death ensued 23 days after the operation. At the autopsy the entire gall bladder was found to be lined with chronic ulcers, two of which had apparently perforated, causing a general peritonitis.

Lancet-Clinic, Cincinnati, Ohio.

June 23.

19 Surgical Aspect of Cholecystitis. S. Stark, Cincinnati.
20 Closure of Uretero-Vaginal and Vesico-Vaginal Fistulæ. M. I. Rosenthal, Ft. Wayne, Ind.

St. Louis Medical Review.

June 16.

21 The Psychology of Graft. G. F. Lydston, Chicago.

The Laryngoscope, St. Louis.

May.

22 Affections of the Lips, Mouth and Tongue, as Seen by the Dermatologist. (To be continued.) W. S. Gotthell, New York.
23 *Sounds for the Eustachian Tube. S. Yankauer, New York.
24 *Tuberculosis of the Tonsils. G. B. Wood, Philadelphia.
25 Empyema of Frontal, Ethmoidal and Sphenoidal Cells, with Abscess in Orbit, Serous Meningitis, Optic Neuritis, Otitis Media, Operation, Recovery. N. L. Wilson, Elizabeth, N. J.
26 An Improved Office Sterilizer. E. Tynchon, Chicago.
27 Antitoxin Treatment of Hay Fever. L. S. Somers, Philadelphia.
28 Case of Adeno-Sarcoma of the Tonsillar Ring; Resection of Both External Carotid Arteries; Recovery. W. R. Dabney, Marietta, Ohio.
29 Case of Abscess of the Parotid Gland Simulating Mastoid Abscess. J. C. McAllister, Ridgeway, Pa.
30 Abscess of the Cartilaginous Nasal Septum; Deformity Corrected by the Subcutaneous Injection of Paraffin. M. D. Lederman, New York.

23. Sounds for Eustachian Tube.—The special features of the instruments described by Yankauer lie in the material in which they are made, in their shape, in the markings, by which the distance they are introduced can be measured, and in the special methods of treatment which these advantages permit. The sounds are made of strands of catgut, surrounded by an elastic resinous substance which resists the action of boiling water, so that they can be sterilized. This covering is soft and smooth, and the sound is very flexible, so that it follows the curves of the Eustachian tube with greater ease, and consequently with less pain, than the usual form of bougie. The sounds are of uniform caliber throughout except at the tip, which is tapered to such a degree that the tip of each sound is slightly smaller than the shank of the next smaller size. They differ from the ordinary bougie in that the bulbous extremity is absent. In order to measure the distance to which the sound is introduced, a scale has been provided. As the instruments are so small that a numerical scale can not be used, a series of black marks and spaces, arranged in an arbitrary manner, has been employed.

24. Tuberculosis of Tonsils.—Wood reviews his previous work in this field and reports an additional case in support of his claim that the tonsil is the avenue of infection in tuberculosis of the lungs.

Brooklyn Medical Journal.

June.

31 *An Improved Technic for Operation for the Removal of Hemorrhoids. L. S. Pilcher, New York.
32 Are Tuberculous Clinics Dangerous to the Public Health? J. H. Raymond, New York.
33 Anatomy and Pathology of Intestinal Obstruction. W. H. Rankin, New York.
34 Associated Stomach and Gynecologic Lesions. C. R. Hyde, Brooklyn, N. Y.
35 Middle-Ear Catarrh. L. Emerson, Orange, N. J.
36 Effect of the Kindergarten on the Development of Children's Eyes. N. L. North, New York.
37 Causes of Delayed and Non-united Fractures. W. L. Duffield, Brooklyn.

31. New Operation for Hemorrhoids.—For ordinary hemorrhoids of moderate severity, Pilcher employs the following method: The sphincter having first been divulsed, the mass to be removed is grasped by a ring forceps and pulled out so as to put the parts at its base well on the stretch; then a longitudinal incision through the mucous membrane and skin on either side of the cone thus drawn out is made, which passes out on to the skin so as to include as much as it may be necessary to remove, in order sufficiently to retrench the redundant skin tissue. Beginning with the apex of this triangular flap of skin, the mass is dissected up from the deeper tissues to the base of the pile proper; then, into the sulcus produced by this skin elevation and the lateral incisions, an ordinary pair of Kocher's hemostatic forceps is thrust so as to clamp the comparatively narrow pedicle of the tissue left. The portion of the pile that protrudes beyond the clamp is now cut off; then a ligature is applied by a needle passing through a fold of the mucous membrane just beyond the point reached by the clamp. When this is tied, the main part of the blood supply of the parts below is cut off. The long end of this ligature thread is then carried by the needle as a running suture around the mass in the grasp of the clamp, from within outward, until all the tissue grasped by the clamp has been included. The clamp is now loosened and withdrawn and the ligature is drawn up tight. By these maneuvers a complete excision of the pile and a definite and satisfactory closure of the wound by suture is accomplished.

Chicago Medical Recorder.

June.

38 *Indications for Surgical Interference in Disease of the Faucial Tonsils and Methods of Choice in Operating. W. E. Casselberry, Chicago.
39 *Gram Stain of the Stools; Method Applicable in the Diagnosis of Carcinoma of the Stomach. C. A. Elliott, Chicago.
40 Commercialism in Medicine. H. B. DeBey, Chicago.
41 Diagnosis and Differential Diagnosis of Hip Disease. J. I. Porter, Chicago.
42 Somnoform Anesthesia. C. M. Paden, Chicago.

38. Surgical Interference in Disease of Faucial Tonsils.—Casselberry states that the methods of choice in operating have reference particularly to the avoidance of hazard, the minimizing of pain, and the effectiveness, permanence, and harmlessness of the results. Of children under 14 years of age operated on under general anesthesia, there were 165, in a series of 480 cases, of whom nine-tenths took ether, alone, or preceded by a few whiffs of A. C. E. mixture. The other one-tenth had gas or bromid of ethyl, the suitability of which for modern tonsillectomy, Casselberry claims, is limited to easy cases of pedunculated type, which should not require prolonged dissection. Of children under 14, but mostly over 10 years of age, operated on with local (cocain) anesthesia, there were 112. In these two series of cases there was no case of unusual hemorrhage. Casselberry has succeeded in obtaining final information in about two-fifths of these cases, from which it is estimated that the ratio of recurrences in the ether series is one to six, and in the cocain series, one to four. Out of 203 operations, mostly double, in adult life, serious troublesome hemorrhage occurred in 14, two of which were in persons 15 years of age. One was a cautery snare case, three were incident to fragmental dissection, and 10 followed the use of the tonsillotome. None resulted from the use of the cold snare.

39. Gram Stain of Stools.—Of 25 cases examined by Elliott 16 showed Gram-negative, 7 Gram-positive, and 2 almost exclusively Gram-negative stools. In the 16 cases showing Gram-negative stools this fact was considered the point which spoke against the probability of a carcinoma of the stomach being present, and of this group only 1 case was a case of carcinoma of the stomach. Of the 7 cases showing Gram-positive stools, 6 were carcinomas of the stomach and 1 was acute gastric ulcer. Elliott believes that a Gram stain of the stools may throw considerable light on the diagnosis in abdominal cases in general, and especially where the diagnosis lies between a gastro-intestinal process on the one hand and a pathologic process occurring in some other abdominal organ on the other. While a Gram-positive stool is in no way pathognomic of carcinoma of the stomach, yet it very frequently occurs in this condition. The presence of a typical Gram-positive stool is a sign which may be used to advantage in establishing a diagnosis of carcinoma of the stomach, and especially in cases where the use of the stomach tube is contraindicated. In cases in which an old gastric ulcer is known to exist, a Gram stain of the stools may be made from time to time, with the idea that when a carcinoma develops on the site of the ulcer, it may manifest itself by a change in the stool flora, which would be detected by a Gram stain, and thus lead to an early diagnosis. An exclusively Gram-negative bacillary stool, while uncommon, yet speaks very decidedly against a carcinoma of the stomach being present.

University of Pennsylvania Medical Bulletin, Philadelphia.

June.

43 *Malignant Disease of the Thyroid Gland. G. P. Müller and J. Speese.
44 Pneumonia in a Four Days' Old Infant, Due to the Bacterium Mucosus. H. Fox and R. S. Lavenson, Philadelphia.
45 Hysteria Simulating Brain Tumor. T. H. Weisenburg, Philadelphia.
46 Typhoid Fever—Accidental Infection with Bacillus of Malignant Edema. N. B. Gwyn, Philadelphia.

43. Malignant Disease of Thyroid.—A very careful review of 31 cases of carcinoma and 117 cases of sarcoma of the thyroid

recorded in the literature is summarized by Müller and Speese as follows: 1. Malignant disease of the thyroid gland is not a common affection, particularly in this country, where only eleven sarcomas have been recorded. 2. It is encountered more frequently in women (three to two) and the greater number of cases (53 per cent.) occur between the ages of 40 and 60. Only 11 per cent. of the sarcomas occurred in patients under the age of 30. 3. In 53 per cent. of cases a history of a previous goiter will be obtained, which in over half the cases is of more than ten year's duration. 4. Adenocarcinoma and the round-cell and spindle-cell sarcomas are the most frequent types of tumor. Papillary cystadenocarcinoma is the least malignant form of carcinoma and presents the most favorable prognosis. 5. The metastasis involves the lungs and bones most commonly and of the latter the skull and inferior maxilla the most frequently. Carcinoma invades distant structures by way of the blood vessels and sarcoma may be disseminated through the lymphatic channels with greater frequency than is the usual rule. 6. Malignant goiter causes death in at least 70 per cent. of cases.

Albany Medical Annals.
June.

47 *Adams-Stokes Disease. H. C. Gordinier, Troy, N. Y.
48 Albany Medical College in War Time. T. D. Crothers, Hartford, Conn.

47. **Adams-Stokes Disease.**—Gordinier reports three cases of this disease, two of which terminated fatally. The other patient improved considerably under the administration of nitroglycerin, iodid of potassium and strychnin.

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis.
June 1.

49 Strangulated Hernia. H. Holte, Crookston, Minn.
50 *Ulcer and Cancer of the Stomach; Their Relationship. C. Graham, Rochester, Minn.
51 *Rapid Healing in Septic Cases, Including the Use of Iodoform Wax in Bone Cases. A. T. Mann, Minneapolis.

50. **Ulcer and Cancer of the Stomach.**—Graham presents the evidences for the belief that cancer arises from a previous ulcer. He suggests that what is most needed today is better and earlier diagnosis in both ulcer and cancer of the stomach so that non-medical cases may be reached by the surgeon by the time promises for life are greatest and when the pathologic conditions is easiest to demonstrate.

51. **Iodoform Wax in Bone Cases.**—Mann has had excellent results in the use of von Mosetig's bone wax in the treatment of chronic and subacute osteomyelitis, both septic and tubercular. This wax is made of iodoform 60 parts, oil of sesame 40 parts, and spermaceti 40 parts. It is solid at the body temperature, but it is easily made fluid by placing a bottle in hot water; when poured into a bone cavity it rapidly hardens.

Journal of Nervous and Mental Disease, New York.
June.

52 *Multiple Sclerosis: Its Clinical Course and Pathologic Anatomy. E. W. Taylor, Boston.
53 Subcortical Cerebral Gumma Accurately Localised in the Comatose State; Death; Recovery. G. A. Moleen, Denver, Colo.
54 The Paradoxic Reflex. A. Gordon, Philadelphia.

52. **Multiple Sclerosis.**—Taylor is of the opinion that multiple sclerosis occurs far more often in this country than is supposed. He emphasizes the need of a more careful examination of atypical cases and a more open mind in diagnosis, as well as the importance of observing and properly estimating minor symptoms of the disease, particularly unexplained spasticity and ocular disorders. As to the pathologic anatomy of the disease, Taylor believes that present evidence points toward a primary destruction of the myelin with either a secondary or coincident proliferation of the neuroglia.

Indiana Medical Journal, Indianapolis.
June.

55 President Stone's Address to the Graduates and Faculty of the Indiana Medical College.
56 Spinal Analgesia. J. W. Sluss, Indianapolis.
57 Address to the Graduating Class of the City Hospital Training School for Nurses. T. Potter, Indianapolis.
58 *Asbestos as a Surgical Dressing. A. S. Jaeger, Indianapolis.
59 Relation of the State to Tuberculosis. A. F. Tucker, Noblesville.
60 Diagnosis of Paralysis of the Individual Ocular Muscles Simplified. W. N. Sharp, Indianapolis.

58. **Asbestos as a Surgical Dressing.**—For the past two years Jaeger has used asbestos as a surgical dressing and also for making pneumonia jackets, dry poultices and continuous wet dressings with most gratifying results. He is convinced of its superiority over cotton and gauze. Asbestos can be sterilized and re-sterilized thoroughly; it does not become adherent to the wound and possesses great hygroscopic properties. Used as a continuous wet dressing Jaeger has found by actual experiment that it remains moist from 2 to 3 hours longer than cotton or gauze compresses. Although asbestos is more expensive than cotton or gauze, yet one pound of asbestos will practically go as far as two pounds of cotton.

Detroit Medical Journal.
June.

61 *Treatment of Tetanus. T. B. Cooley, Detroit.
62 The Speaking and Singing Voice as Affected by Abnormal Conditions of the Nose and Throat. W. S. Anderson, Detroit.
63 The House of the Surgeon at Pompeii. A. H. Griffith, Detroit.

61. **Treatment of Tetanus.**—Cooley does not offer anything new but sets forth those methods which on theoretical and practical grounds seem most rational in the treatment of tetanus. He believes that the mortality with which the disease has heretofore been attended has been far too high, and that this often is due to perfunctory treatment on the part of the attending physician when he feels that the case is so severe that no form of treatment can be of avail. Cooley advises the free use of antitoxin, subcutaneously and intravenously, in doses sufficiently large to be of value in neutralizing the toxin. He thinks that from 50 to 75 c.c. daily is not an excessive dose, especially at the beginning of the treatment.

Northwest Medicine, Seattle, Wash.
June.

64 Early Diagnosis of Cancer of the Breast. J. W. Bean, Tacoma, Wash.
65 Early Diagnosis of Cancer of the Uterus. C. A. Smith, Seattle.
66 Early Diagnosis of Cancer of the Stomach. E. C. Wheeler, Tacoma.
67 Early Diagnosis of Cancer of Lip and Tongue. T. F. Smith, Tacoma.
68 *Intramuscular Injections in the Treatment of Syphilis and the Use of the Sozoiodolate of Mercury. A. Garceau, San Francisco.
69 Diphtheria and the Action of the *Bacillus Diphtheriæ* as Compared with Other Bacteria. H. M. Greene, La Crosse, Wash.
70 The Chambers Abdominal Suture. R. J. James, Seattle.

68. **Intramuscular Injections in Syphilis.**—In primary and secondary cases Garceau gives 20 or 30 minims of the Lengfeld solution until complete disappearance of all manifestations or until he preceives symptoms of mercurialization. He continues this treatment every third or fourth day until the expiration of two months. He then begins by giving mild mercurial medication, say one-eighth of a grain of protoiodid, with opium, twice a day for an interval of two months. His patients are never disturbed by this internal medication after having taken mercury by injection. Further treatment is carried on by the demands of the individual cases. Garceau prefers the use of a soluble salt. Though inconvenient from the necessity of frequent injections, these salts are the best absorbed and best tolerated and there remains no danger of leaving any mercury in the tissues for further trouble. They are less painful than the insoluble salts, and keep the patient, during the most acute stage, almost daily under personal supervision. The technic which he employs is as folows: A site is chosen on the buttock at a point about midway from the trochanter of the femur to the sacral prominence. This spot is cleansed carefully by swabbing with ether-and a sufficient time is allowed for evaporation which produces a mild anesthesia. The syringe is filled with the solution, then a trochar-needle is quickly plunged into the gluteus muscle. The trochar is removed and if there is no oozing from the wound the barrel is attached to the needle and the solution slowly introduced. The point of insertion is then covered with absorbent cotton and vigorous massage maintained for a few minutes. This massage is to obviate any danger of nodulation and relieves the pain of injection materially. The prick point can then be covered with collodion. The needle and syringe, of course, should be well sterilized before and after using. Since Garceau has been using intramuscular injections he has never had an abscess, deep nodulation, or any accident whatever, and has never received any complaint from his patients.

Archives of Otology, New Rochelle, N. Y.
April.

71 Circulatory Disturbances Following Ligation of the Internal Jugular Vein in Sinus Thrombosis. W. P. Eagleton, Newark, N. J.
72 Otitis Interna Sinistra Hemorrhagica; Vicarious Menstruation. E. Amberg, Detroit, Mich.
73 What Cases of Chronic Purulent Otitis Require the Radical Operation? A. Knapp, New York.
74 Leucocyte Count in Inflammatory Diseases of the Ear and of the Temporal Bone and in Otitic Intracranial Complications. Suckstorff, Hanover, Germany.
75 Postoperative Pyocyaneous Perichondritis of the Auricle. Tatsusaburo, Sarai, Japan.
76 A Congenital Fibrolipoma of the Palatine Tonsil. Zolkl, Strassburg.
77 The Course of the Sigmoid Sinus in the Child's Skull. P. Rudloff, Wiesbaden.

The Philippine Journal of Science, Manila.
April 15.

78 Flora of the Lamao Forest Reserve. E. D. Merrill, Manila.

Southern California Practitioner, Los Angeles.
May.

79 An Earthquake Symposium. E. W. Fleming, Los Angeles; J. C. King, Banning; W. E. Hibbard, Pasadena; F. D. Bullard, H. G. Brainerd, Los Angeles, and others.
80 Early Diagnosis of Pulmonary Tuberculosis. C. C. Browning, Monrovia, Cal.

Medical Examiner and Practitioner, New York.
May.

81 Syphilis in Regard to Life Insurance. J. Kucher, New York
82 Physiology of Glycolysis. D. L. Edsall, Philadelphia.
83 Varieties of Glycosuria. L. N. Boston, Philadelphia.
84 Relation Between Diabetes Insipidus and Diabetes Mellitus. A. G. Ellis, Philadelphia.
85 Management of Cases of Diabetes Mellitus. J. Tyson, Philadelphia.
86 Clinical Analysis of 979 Cases of Nervous and Mental Diseases. J. Punton, Kansas City, Mo.
87 Eye Symptoms in Medical Diagnosis. F. E. Franchere, Sioux City, Iowa.
88 Effect of Tobacco in Health and Disease. L. Brunton, London.

Denver Medical Times and Utah Medical Journal.
May.

89 Treatment of Fatty Heart. H. W. McLauthlin, Denver.
90 Id. E. Stuver, Ft. Collins.
91 Fatty Degeneration of the Heart. W. J. Rothwell, Denver.
92 Treatment of Fatty Degeneration of the Heart. A. S. Taussig, Denver.
93 Treatment of Fatty Heart. F. P. Gengenbach, Denver.
94 Osteoplastic Operation on the Lower Jaw. E. J. A. Rogers, Denver.
95 Pneumonia. G. F. Butler, Chicago.
96 Ocular Symptoms in General Diseases. E. W. Stevens, Denver.
97 Laboratory Diagnosis for the Practitioner. J. C. Todd, Denver.

Texas Medical News, Austin.
May.

98 The Leucocyte Count in Appendicitis. J. T. Moore, Galveston.
99 Wasting of the Truss. R. W. Knox, Houston.
100 The Uterus and Ovary of Neurasthenia. R. L. Dickinson, New York.

Wisconsin Medical Journal, Milwaukee.
May.

101 Ventrofixation of the Uterus: Its Effects on Subsequent Pregnancy. V. F. Marshall, Appleton.
102 Splanchnoptosis. R. W. Harrington, Milwaukee.
103 Relapsing Syphilis. W. F. Bernart, Chicago.
104 Physiologic Therapy and Its Application as an Adjuvant to the Drug Treatment of Consumption. J. Moeller, Milwaukee.
105 Case or Tetanus. D. Waters, Grand Rapids, Wis.

Fort Wayne Medical Journal-Magazine.
May.

106 Complicated Fractures. C. B. Stemen, Ft. Wayne.

Journal of the South Carolina Medical Association, Charleston.
May 21.

107 Address of the President Before the South Carolina Medical Association. D. Furman, Greenville.
108 Subsidiary Contributions to Medical Success. W. T. English, Pittsburg.

The Medical Standard, Chicago.
June.

109 Notes from Nothnagel's Clinic. G. B. Hassin, Chicago.
110 Nephroptosia in Splanchnoptosia. B. Robinson, Chicago.
111 Practical X-Ray Therapy. N. M. Eberhart, Chicago.
112 Syphilis. V. V. Hunt, Blackwell, O. T.

Journal of the Kansas Medical Society, Lawrence.
June.

113 Surgical Treatment of Stenosis of the Pylorus. A. L. Bleah, Guthrie, Okla.
114 Syphilis of the Lungs. M. Shoyer, Leavenworth, Kan.
115 Acute Endocarditis. R. C. Lowermilk, Galena, Kan.
116 Conjunctivitis. (To be continued.) D. F. Longenecker, Emporia, Kan.
117 Pneumonia. E. Smith, Lawrence.

The Postgraduate, New York.
June.

118 Xanthoma Tuberosum Diabeticorum. R. Abrahams, New York.
119 Atonia Gastrica in Relation to Cholelithiasis. A. Rose, New York.
120 Infection by the Gonococcus. J. Pedersen, New York.
121 Gonorrheal Infection of the Joints. H. N. Taylor, New York.
122 Gonococcal Infection of the Seminal Vesicles. E. Fuller, New York.
123 Gonococcal Infection, in Reference to the Eye. F. Valk, New York.
124 Gonococcal Infection of the Kidney. F. Cabot, New York.
125 Renal Casts and Their Clinical Significance. B. F. Cline, New York.

International Journal of Surgery, New York.
June.

126 Observations in a Traumatic Hospital Service, Including Amputations, Fractures, Injuries of the Brain and Spinal Cord. J. M. Wainwright, Buffalo, N. Y.
127 Hysterectomy for Large Fibrocystic Tumor of the Uterus: Rupture of the Bladder Wall; Closure of the Opening by Peritoneum. P. F. Eve, Nashville, Tenn.
128 Tuberculosis Verrucosa Cutis. W. S. Gottheil, New York.
129 Tubercular Peritonitis. T. E. Potter, St. Joseph, Mo.
130 Best Method of Removing the Uterus Through the Vagina. E. Lanphear, St. Louis.
131 A Visit to the Mayo Brothers. D. McCaskey, New York.

St. Louis Courier of Medicine.
June.

132 Selection of Remedies for Neuralgias. W. C. Abbott, Chicago.
133 Significance of Vomiting. H. R. Coston, Birmingham, Ala.
134 Treatment of Retrodexion of the Pregnant Uterus. G. Gellhorn.
135 Passive Hyperemia. E. A. Babler.

American Practitioner and News, Louisville, Ky.
June.

136 Uterine Displacements. I. Abell, Louisville.
137 Abscess of the Lung After Typhoid Fever. J. W. Irwin, Louisville.
138 Rheumatism as a Factor Entering into Eye and Throat Diseases. C. Joyes, Ft. Worth, Texas.
139 A Simple Method of Expanding the Lung After Operation for Empyema. J. D. Maddox, Rockport, Ky.

Journal of the Medical Society of New Jersey, Newark.
June.

140 Unusual Heart Murmurs. C. D. Bennett, Newark.
141 Treatment of Pulmonary Tuberculosis. W. Reynolds, Atlantic City.
142 Some of the More Common Forms of Acute Peritonitis. M. A. Shangle, Elizabeth, N. J.
143 Diagnosis of the Exanthemata. J. F. Schamberg, Philadelphia.
144 Observations on the Care and Treatment of Infants and Young Children. L. W. Halsey, Montclair, N. J.

Columbus Medical Journal.
June.

145 Address of Welcome to the Ohio State Medical Association at Canton Meeting, May 9, 1900. J. F. Marchant, Canton.
146 Tuberculous Pericarditis, with Presentation of a Specimen. C. W. McGavran, Columbus.
147 Typhoid Fever of Childhood. H. B. Blystone, Columbus.
148 Treatment of Pulmonary Tuberculosis in Private Practice. J. P. De Witt, Canton.
149 Chronic Eczema. J. V. Shoemaker, Philadelphia.

Virginia Medical Semi-monthly, Richmond.
June 8.

150 Early Diagnosis and Management of Pulmonary Tuberculosis. R. J. Kline, Portsmouth.
151 Production and Therapeutic Value of Roentgen Rays. J. C. McGuire, Washington, D. C.
152 The Eyes of the New Born. J. M. Coleman, Jerome.
153 Peripheral Neuritis. F. B. Bishop, Washington, D. C.
154 Intestinal Antiseptics; Systemic "Depolsonera." J. R. Landers, Bernadotte, Ill.
155 Appendicitis as Seen by the Country Doctor. W. B. Daniel, Templeton, Va.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.
June 9.

1 *Endemic Sporadic Dysentery (with Shiga's Bacillus) in England. R. Saundby.
2 Clinical Features of the Several Types of Colitis. H. A. Caley.
3 *Two Cases of Ruptured Duodenal Ulcer. J. Clay.
4 Mind and Matter. T. C. Shaw.
5 General Convulsions in Early Infancy Induced by the Taking of Food. E. Smith.
6 Infectivity of Enteric Fever. W. Wright and W. Archibald.
7 *Successful Amputation of the Leg at 94 Years, with an Account of a New Operation. C. W. Branch.

1. **Endemic Sporadic Dysentery.**—Saundby reports two cases of this affection which had been diagnosed previously as cases of ulcerative colitis. Neither patient had ever been out of England yet Shiga's bacillus was found in both instances on bacteriologic examination. One patient gave a history of continuous diarrhea for six months and the other for eleven weeks. This patient died from perforation, with extensive ulceration of the colon, after having been under the treatment for three weeks. Saundby employs the treatment recommended by Gemmel.

3. **Ruptured Duodenal Ulcer.**—The two cases reported by Clay are cited as examples of perforation of the duodenum without either vomiting or abdominal distension. One patient had suffered from severe pain in the epigastric region for nine years. Suddenly the pain became so severe that the patient was obliged to lay down. There was no vomiting, the bowels did not act and no flatus was passed. The ulcer, which was found in the duodenum, one inch from the pylorus, was closed by one suture of thick catgut through all the coats of the bowel. This was buried with Lembert sutures; the peritoneal cavity was washed out with hot saline solution and drained from both flanks and from above the pubes by means of rubber tubes. The patient made an uneventful recovery. The second patient had a sudden severe pain in the lower part of the abdomen, the pain being deflected into the right testes. There was no vomiting, no bowel movement and no flatus was passed. The operation was similar to that in the first case, the ulcer being similarly situated. The patient died twenty-four hours after the operation. In both cases the abdomen was very tender, retracted and extremely rigid.

7. **New Method of Amputation of Leg.**—Branch performs this method where great rapidity is desirable and the leg is spare enough to permit it. The left hand seizes the outer side of the leg at the point of section of bone, thumb to the front. The skin over the tibial surface is drawn forcibly outward, the point of the knife is made to enter at the edge of the tibia, graze the fibula and emerge as far inward as possible on the back of the leg, and a flap is then cut downward. On releasing the leg the front of the incision flies inward, so that it is now possible to enter the knife and clear the tibia to reach the point of exit behind, and cut the internal flap which should equal the external. With the catlin a semilunar periosteal flap is cut from the front of the tibia, and quickly stripped upward, the bones cleared and the saw entered at first obliquely, then straight, in the usual way, so as to take off the front corner of the tibia. This point of bone is in the anterior angle of the wound, but being covered by the periosteal flap never becomes adherent. Two acupressure pins are inserted between the bones crosswise, so that the anterior and posterior tibial arteries lie in the opposite angles. A stout silk is now wound by figures-of-eight so as to close the pins together and compress the arteries. The pins are slightly withdrawn from their cannulæ, so that the points are hidden, and the tourniquet removed. Two vessels in the heads of the gastrocnemius usually require ligature, and nothing remains but to suture, leaving the heads of the pins and the end of their silk protruding from the anterior angle of the wound. The pins are removed about three or four days after, and the silk, then loose, easily comes away.

The Lancet, London.

June 9.

8 *Chronic Appendicitis and the Early Diagnosis and Treatment of Acute Appendicitis in Children. A. Broca.
9 Dyspepsia. A. G. Barrs.
10 *Pneumococcic Peritonitis in Children. W. F. Annand and W. H. Bowen.
11 Achondroplasia; Its Occurrence in Man and in Animals. C. R. Keyser.
12 *Tuberculous Disease of the Seminal Tract. K. E. Gunn.
13 *Case of Acute Yellow Atrophy of the Liver. H. C. Keates.
14 Deep Alcohol Injections in Facial and Other Neuralgias and in Histrionic Spasm. F. Ostwalt.
15 Case of Acute Poisoning with Oil of Eucalyptus. J. Benjamin.
16 *Hygienic Measures Against Syphilis. E. Metchnikoff.

8. **Appendicitis in Children.**—Broca is of the opinion that muco-membranous enteritis is a frequent cause of appendicitis both in children and in adults, thus indicating the need of carefully combined surgical and medical treatment. Patients who for years have been treated for obstinate dyspepsia, even for supposed intestinal and peritoneal tuberculosis, may have been suffering only from chronic appendicitis. The symptoms of the treatment are described at great length.

10. **Pneumococcic Peritonitis in Children.**—Annand and Bowen studied 16 cases, from which they draw the following conclusions: 1. Pneumococcic peritonitis is a comparatively rare disease in children, but in the past many cases have not been recognized. 2. It is in about a third of the cases secondary to some remote pneumococcal lesion; of these, affections of the lungs and pleuræ are by far the commonest, the middle ear being the next most common site. The infection is carried to the peritoneum in the blood stream. 3. In the remaining two-thirds the peritoneum is probably infected from the bowel in the vast majority. No microscopic lesion is, as a rule, found. 4. In half the cases the pus is encysted; in these the diagnosis is fairly easy, the prognosis is good, and the treatment is laparotomy and drainage. 5. In the other half of the cases the peritonitis is diffuse, the diagnosis is very difficult, and the prognosis very gloomy. **The treatment is laparotomy.** 6. The pathologic appearances are characteristic.

12. **Tuberculous Disease of Seminal Tract.**—Gunn summarizes the results of a careful study of six cases as follows: 1. Infection may readily pass along a normal vas to the vesicle or prostate; the fact that the vas above a diseased testis feels healthy is no proof that the tubercle has not extended to the vesicles. 2. When both testicles and seminal vesicles are infected radical treatment alone is likely to be followed by success. 3. When the disease is confined to the seminal tract it can be completely removed and that without any great risk to the patient. 4. In all probability the patient is functionally no worse after such an operation than after a partial operation on both testes.

13. **Acute Yellow Atrophy of Liver.**—Keates reports a case occurring in a man, aged 18, who was thought to be suffering from a severe case of catarrhal jaundice. When the patient became delirious and vomiting and bleeding from the gums occurred it was evident that a simple jaundice could not account for all these symptoms. When it was found that the liver dullness which had previously been normal was greatly diminished and that leucin crystals appeared in the urine, there was little doubt of the diagnosis. Tyrosin crystals were not seen in the urine until the day before the man's death. Previous to his illness the man was perfectly healthy, there were no signs of syphilis, and being a Mohamedan, he had probably never touched alcohol. There was no enlargement of the spleen and there was no great tendency to hemorrhage; the only one that occurred was from the gums. The jaundice was most intense and both the tears and saliva were tinged with bile.

16. **Hygienic Measures Against Syphilis.**—Some of the experiments detailed by Metchnikoff have been referred to in THE JOURNAL, page 1779. The conclusion from those experiments was that mercurial ointments might certainly be useful prophylactics against syphilis in all those cases in which a contact had taken place. Instead of gray ointment, which caused much irritation in the skin and mucous membranes, the use of salves made up with non-irritating mercury salts should be recommended, such as calomel. The results obtained on lower monkeys and on anthropoid apes agreed so well as to justify the conclusion that the same method might also serve for the prevention of syphilis in man. Nevertheless, to make sure, they decided to try an experiment on a man. They inoculated at his own request a young medical student, who had almost completed his studies, with virus from the chancres of two syphilitic men. An hour after the parts inoculated were rubbed for five minutes with an ointment which contained in three parts one part of calomel. The young man, although certainly free from any former syphilitic taint, developed no primary lesion. Four macaci were treated with the same virus with which he was inoculated. Two of them, used as control animals, showed primary lesions seventeen days later. A third macacus was rubbed with the calomel ointment an hour after inoculation of the virus and remained free from any syphilitic lesion, like the young man. The fourth macacus was rubbed with the ointment twenty hours after inoculation

and showed a primary lesion after thirty-nine days. That experiment, therefore, showed that man could with advantage employ mercurial ointments after every suspicious contact in order to preserve himself from syphilis. In a long series of experiments carried out on chimpanzees, baboons and macaci, mercurial inunction successfully prevented the outbreak of a primary lesion. The virus was inoculated either on the eyebrows or on the genital organs of the males and females. It was taken from a primary lesion in man and was thoroughly applied with a scarifier. The ointments employed were prepared either with metallic mercury or with calomel, white precipitate, or salicyl-arsenite of mercury. The substances were suspended in lanolin (1 in 3 or 1 in 4). Inunction was carried out for from four to five minutes and was begun between one and twenty hours after the inoculation. Even when applied eighteen and one-half hours after infection calomel salve still proved effective.

Journal of Tropical Medicine, London.

June 1.

17 Diseases Met in South Sylhet, India. A. B. Dalgetty.
18 Anatomy of the Biting Flies of the Genera *Stomoxys* and *Glossina*. (To be continued.) G. M. Giles.
19 Puru of the Malay Peninsula. (To be continued.) T. D. Gimlette.

Journal of the Royal Army Medical Corps, London.

June.

20 Bacteriologic Examinations of Cases of Mediterranean Fever. J. C. Kennedy.
21 An Examination of Goats in Malta, with a View to Ascertain to what Extent They are Infected with Mediterranean Fever. T. Zammit.
22 Contact Experiments. W. H. Horrocks.
23 Ambulatory Type of Case in Mediterranean or Malta Fever. (To be continued.) E. A. Shaw.
24 Hints Regarding the Management and Use of X-Ray Apparatus. (To be continued.) F. Bruce.
25 *A Modified Artery Forceps. F. F. Carroll.
26 The Leishman Body, the Gregarine Stage of a Herpetomonas. C. Birt.
27 Latrine Infection in the Enteric Fever of India. D. Wardrop.
28 The Goux System and Its Application to India. R. J. Blackham.
29 An Indian Incinerator. H. A. Haines.
30 Continental Surgical Procedure. F. F. Carroll.
31 Preserving Health of Soldiers in the Field. G. S. McD. Elliot.
32 Army Bearer Corps. A. E. Milner.

25. **Modified Artery Forceps.**—The forceps devised by Carroll is said to facilitate the tying of arteries situated at a depth from the surface of the body, and particularly in those cases in which, owing to want of space, great difficulty is experienced in slipping a loop of ligature along the forceps already *in situ*. Carroll has found them of great assistance in cranial surgery. The method of using is extremely simple. The ligature material, whether silk or catgut, is first looped over the notch in the lower blade and both ends crossed under the spring catch on the handle, where they are held tightly. The forceps can now be applied to an artery. When the vessel has been clipped the ends of the ligature should be released and tied in a surgical knot. If the knot is tightened the ligature will be found to slip by itself off the nose of the forceps on to the artery.

Annales de Dermatologie et de Syphiligraphie, Paris.

Last indexed XLV, page 359.

33 (VI, No. 6.) Trois nouveaux cas de porokératose. V. Mirbelli and M. Truffi.
34 Gonococcie métastatique de la peau (Angiodermite suppurée à gonocoques). C. Audry.
35 (Nos. 8-9.) Prurigo lymphadénique. W. Dubreuilh.
36 (No. 10.) Successful Inoculation of Eyelids of Monkeys with Syphilitic Products.—Etudes de vénéréologie experimentale. G. Thibierge and P. Ravaut. (Commenced in No. 7.)
37 Etude de la nutrition dans les dermatoses. A. Desgrez and J. Ayrignac.
38 (No. 11.) Le spirochète de la syphilis. E. Burnet.
39 De l'herpès récidivant de la fesse (of nates). W. Dubreuilh.
40 (No. 12.) Le lupus érythémateux à forme d'atrophodermie en plaques. G. Thibierge.
41 Les formes bulleuses de l'hydroa vacciniforme (Bazin). E. Constantin.
42 (VII, No. 1.) Pathogénie des éruptions bromiques. A. Pasini.
43 Les œdèmes aigus circonscrits de la peau et des muqueuses (circumscribed edema of skin and mucosa. R. Morichau-Beauchant.
44 (No. 2.) Cas de syphilis héréditaire tardive du foie (of liver). E. Devic and J. Froment.
45 Histologie du lichen plan des muqueuses. W. Dubreuilh.
46 (No. 3.) Etude des tuberculides papulo-squameuses. 3 cas de tuberculides à forme de parapsoriasis. A. Civatte.
47 *Traitement de la syphilis par la voie rectale. C. Audry. (First part in No. 10.)
48 (No. 4.) Dermatomycose des regions glabres causée chez l'homme par le *Microsporon canis*. J. Nicolas and L. Laconme (Lyons).
49 Tension superficielle des urines dans la syphilis, dans la blenorrhagie et dans quelques dermatoses (psoriasis, etc.). C. Combelléran.

47. **Mercurial Treatment by Way of the Rectum.**—Audry has been giving this method of mercurial treatment a thorough trial in 48 cases and has been much pleased with the results. He gives the details of 30 typical cases, all showing that mercurial medication by way of the rectum is perfectly tolerated and is as effectual as by other technics. He administers the mercury in the form of suppositories made of cocoa butter and a liquid preparation of metallic mercury in olive oil and vaselin; each suppository contains 2 c.c. of mercury. One suppository is used every evening for a month; they are then omitted for four or five days and then again given. One child of 3 was thus treated with 100 suppositories during four months, each suppository representing 1.5 c.c. of mercury. No local or general inconveniences of any kind were observed. The effect seems to be the same as from other methods of mercurial treatment. In some control cases the course of the lesions under this and parallel mercurial treatment by the ordinary technics seemed to be identical. The action of the rectal medication was particularly prompt and certain in case of lesions in the anogenital region and in the mouth and throat.

Bulletin de l'Académie de Médecine, Paris.

50 (Year LXX, Nos. 15-16.) Tuberculose inflammatoire à forme néoplasique. Adénomes du mamma, du corps thyroïde, etc. d'origine tuberculeuse. A. Poncet and R. Leriche.
51 (No. 22.) Paralysie générale et syphilis chez les Arabes. Marie.
52 Sur les mélanges titrés de chloroforme et d'air. Procédé de Paul Bert. N. Gréhant.
53 *Unnecessary Operations for Appendicitis.—Erreurs de diagnostic et erreurs opératoires. Dieulafoy.

53. **Operations for Non-existent Appendicitis.**—Dieulafoy's communication was summarized in a cable dispatch and has appeared in the daily papers. He has always been an advocate of prompt surgical intervention in case of appendicitis, but he now announces that appendicectomy is frequently done when the symptoms indicate merely an affection of the colon or cecum or both and the appendix is entirely sound. He described a dozen cases in detail in which the patient had had his or her appendix removed without affecting in the least the course of the intestinal affection producing the symptoms. The removed appendix was sound. The slight changes discovered on histologic examination have by no means the significance usually ascribed to them. The ordinary hypertrophy of the closed follicles in the appendix has been branded as folliculitis and used to justify the removal of a sound organ. The hemorrhagic folliculitis chronicled in many cases is merely the result, he states, of the operative injury. Letulle in his extensive study of the subject has never been able to discover this follicular apoplexy except in an appendix that has been operated on. Dieulafoy enters a vigorous protest against the assumption that the appendix frequently becomes inflamed as a result of inflammation of the colon and cecum. On the contrary, he says, the co-existence of true appendicitis and enterocolitis is the very rarest exception. The diagnosis is generally unmistakable under these conditions. A physician practicing at a French watering place has collected 22 cases of mucomembranous or gallstone typhlo-colitis in which the patients came to get relief from a course of the waters, after having been vainly operated on for appendicitis. Their attacks recurred the same as before the operation. Lancereaux corroborated Dieulafoy's statements, relating that he had witnessed a number of similar cases. Besides mucomembranous typhlo-colitis, hysteria and absinthe intoxication are liable to induce a similar syndrome. In one case the patient had a feverish cold with abdominal pains. McBurney's point was very sensitive, but so was the symmetrical point on the other side, and the course of the case confirmed the diagnosis of absinthe poisoning without appendicitis.

Archiv f. Gynäkologie, Berlin.

Last indexed XLVI, pages 1[illegible] and 1[illegible].

54 (LXXVIII, No. 3.) *Zur physiologischen Wirkung der Hydrastis canadensis und des Ergotins auf die Circulations-Organe und die Uterus-Musculatur. L. Fellner.

55 Ueber die Reaction des Vaginal-Sekrets. R. Bengelsdorff.
56 *Mikroskopische Befunde an roentgenisirten Kaninchen-Ovarien (of rabbits). O. Specht.
57 Die physiologische Variationen im Bau des normalen Ovariums und die chronische Oöphoritis. A. Theilhaber and A. Meier.
58 *Gangraena uteri puerperalis (Metritis dissecans?). K. Schmidlechner.
59 *Weitere Studien zur Pharmakologie des Uterus und deren klinische Würdigung. E. M. Kurdinowski.
60 *Scopolamin-Morphin Anesthesia in Labor.—Geburten in künstlichen Dämmerschlaf. C. J. Gauss.
61 *Results of Abdominal Extirpation of Uterine Cancer.—Ergebnisse der abd. Radical operation des Gebärmutterkrebses. G. Brunet.
62 Zur Reform des Hebammenwesens unter Zugrundelegung der sachsischen Verhältnisse (regulation of midwifery). F. Weindler.
63 Complication of Pregnancy and Delivery with Prolapse of a Loop of Intestine with Mucosa Outside.—Darmvorfall mit Schleimhautumstülpung aus einem Anus praeternaturalis heraus. L. Blumreich.

54. **Physiologic Action of Hydrastis Canadensis and Ergot on the Uterus, Etc.**—Fellner's researches confirm those of Kurdinowski in regard to the way in which these drugs act on the uterus independently of their action on the vascular system. The contraction of the uterus induced by preparations of ergot resemble tetany, while hydrastis seems to be able to deprive the ergot contractions of their tetanic character, to render them slower and to prolong the period of relaxation. It might be possible, Fellner thinks, by combining the two drugs, giving one after the other, to induce effectual and harmless labor. This combination would do away with the enormous increase in the intrauterine pressure which Schatz regards as the great drawback to the use of ergot, and which Fellner's researches on animals have confirmed. It would also restore the alternations of contraction and relaxation, important for the expulsion of the fetus.

56. **Microscopic Findings in Rabbit Ovaries After Roentgen Exposures.**—Specht has continued Halberstädter's experiments on rabbits. He found marked changes in the ovaries in from twelve to twenty-four hours after a single exposure of one or two hours with comparatively mild tubes. The vessels of the ovary did not seem to be injured, the changes affected mostly the cells, especially those of the primary follicles and of the interstitial parenchyma. He remarks that it is important to protect the ovaries in exposing the abdomen of female patients. It may prove possible to treat the ovaries directly by proper therapeutic dosage of *x*-ray exposures. The conditions are less favorable than in rabbits, as rabbit skin is much less sensitive to the rays than human skin, but it seems probable that repeated exposures spread over a sufficiently long period might induce atrophy of the ovaries without secondary injury.

58. **Puerperal Gangrene of the Uterus.**—Schmidlechner sketches the history of what used to be called dissecting metritis, but for which puerperal gangrene is a better term. Forty-eight or 50 cases have been reported during the last thirty years, most of them in Russia. One case has been under observation at Budapest, which he describes in detail. The patient was a iv-para of 27, three months pregnant, with sudden uterine hemorrhage, followed by considerable discharge, fever and weakness. The interior of the uterus was found to be gangrenous and the organ was removed about a month after the first symptoms, with the prompt recovery of the patient.

59. **Pharmacology of the Uterus.**—Kurdinowski is continuing his research on this subject, now working in Liebreich's Institute of Pharmacology at Berlin. He describes his technic for study of the isolated, living, rabbit uterus, and then relates the particulars of his tests of various drugs. He found that quinin displayed a marked effect in causing contraction of the uterus. When injected into a vein it causes a few strong contractions and then its effect subsides, but when injected subcutaneously the effect is different. It is more gradually felt, owing to the more gradual absorption of the drug, but it exerts a much more powerful influence, causing a marked, continuous contraction of the uterus, resembling actual tetany, which only very gradually subsides again. This long contraction might cause the asphyxia and even the death of the fetus by its unfavorable action on the circulation. On the other hand, this property might be utilized in combating atony of the uterus and the consecutive hemorrhage, also to favor involution of the uterus after delivery and to arrest uterine hemorrhage of whatever cause. The quinin should be injected subcutaneously, as its effect by the mouth is much less reliable. It is advisable to refrain from the use of quinin during pregnancy on account of this tetanic action on the uterus. He found that berberin and physostigmin have a marked effect in reinforcing the natural contractions of the uterus without affecting their character. His conclusions in regard to adrenalin are that it is unsuitable for use in obstetrics except as a last, desperate resort, when a woman is bleeding to death and all other measures have failed. An intravenous injection of adrenalin would certainly expel the blood from the organ so that further hemorrhage from it would be impossible for the time being. Its action is brief. He found that an intravenous dose of 0.0005 gm. of adrenalin always induced an extremely violent reaction in the rabbit uterus, especially noticeable when the uterus had been previously quiet. Contractions occurred at once and became extremely vigorous, reaching their acme rapidly but subsiding very slowly. The blanching of the uterus for a few minutes, no longer, was followed by a return of the blood, making it appear even redder than normal. Hamamelis, he found, acts on the uterine contractions by reinforcing while modifying them. The article is accompanied by tracings showing the behavior of the uterus under the influence of the various drugs.

60. **Morphin-Scopolamin Anesthesia for Labor.**—Gauss devotes 53 pages to a detailed presentation of his experience with 600 parturients who were delivered under morphin-scopolamin anesthesia. They formed 70 per cent. of the total number of patients at the Freiburg gynecologic clinic during the period in question. He regards it as the ideal method for conducting a labor, the drowsiness induced reducing the perception of the pains almost to the vanishing point. This is accomplished, he says, without any disagreeable subjective by-effects on the woman herself, without essentially modifying the birth act, and without danger to the mother or injury to the child.

61. **Abdominal Hysterectomies for Cancer.**—Brunet analyzes the findings in 70 cases of cancer of the uterus treated by abdominal extirpation at Mackenrodt's private clinic, 1901-4. He compares them with those reported by others recently, classifying thus 251 cases. Among other points brought out, he states that in nearly 50 per cent. of all the cases in which the operation was undertaken in less than four weeks after the first development of symptoms, the cancer had already spread macroscopically beyond the uterus. This was also the case in 20 per cent. after two months of symptoms, in 26 per cent after three months, and in 40 per cent. after six months. About 45 per cent. of the women operated on in 1902 have remained healthy since.

Beiträge z. Geb. und Gynäkologie, Hegar's, Leipsic.

Last indexed XLVI, page 203.

64 (X, No. 2.) *Fatal Affections of Gastric and Intestinal Mucosa After Laparotomies.—Ueber tödtliche Affektionen der Magen- und Darmschleimhaut nach Laparotomien, nebst Bemerkungen zur Melaena neonatorum. O. von Franqué (Prague).
65 Die occipito-sacralen Vorder- und Hinterscheitel- Lagen (vertex presentation). F. A. Kehrer.
66 Ueber einen Ovarial-Tumor mit chorionepitheliomartigen Metastasen im Peritoneum. H. Schmaus.
67 Placenta praevia cervicalis. F. Kermauner.
68 *Ueber Infantilismus und Hypoplasie des Uterus. K. Hegar.
69 Blutuntersuchungen bei Puerperalfieber. Kownatzki.
70 *Preventive, Artificial Filling of the Bladder During Gynecologic Operations.—Ueber die Künstliche Blasenfüllung bei gyn. Op., insbes. bei Laparotomien, als Mittel zur Verhütung nachfolgender Harnverhaltung und zur Ausschaltung toter Räume im Becken. K. Frankenstein (Kiel).
71 Bakteriologische Beiträge zur puerperalen Wundinfektion. H. Hellendall. (Commenced in No. 1.)

64. **Postoperative Fatal Affections of Gastrointestinal Mucosa.**—In von Franqué's experience 2 patients have succumbed to hemorrhages in the digestive tract a few days after apparently successful gynecologic operations. He discusses the various hypotheses advanced to explain such occurrences. Busse has collected reports of 34 such cases occurring after gynecologic operations in a total of 96 after various other operations. As possible adjuvant causes von Franqué mentions compression by a bandage, or from sand bags, etc., used during or after the operation, and forcing the stomach against the spine. Another possible cause is the accumulating secretion

of hydrochloric acid in the stomach purposely kept fasting during and after the operation. The explanation suggested by von Eiselsberg for the ulcerative processes in stomach or intestines, the source of the hemorrhages, is the assumption of retrograde embolism from the portal vein by thrombi resulting from the ligature of vessels in the omentum or mesentery. This explanation might apply likewise to the melena of the new-born. Still another explanation is suggested by 2 other gynecologic cases in his experience in which the findings in the kidney were typical of mercurial intoxication. In both these cases a 1 per thousand solution of corrosive sublimate had been used scantily for the external disinfection of the abdomen and vagina. These cases suggest that it is wiser not to use this preparation for both the field of operation and the vagina at the same time. He does not know of any means of preventing postoperative gastrointestinal hemorrhages.

68. Treatment of a Rudimentary Uterus.—Hegar reviews the cases observed in the Freiburg clinic in which the uterus was defectively developed. They include all phases from the fetal, infantile, congenitally atrophied and hypoplastic to the pubescent uterus. The commencement of menstruation was unusually tardy in more than half the cases, and was accompanied by dysmenorrhea in the majority, and the menses were scanty and irregular in many, with an early menopause. The outlook for a successful pregnancy is bad when the uterus has a pronounced infantile shape, with hypoplasia, and when the ovaries are also defective. With better developed organs, if menstruation has not appeared after the usual age of puberty, or has ceased for a few years after scanty menses for a longer or shorter period, and if other physical anomalies are observed, improvement can scarcely be expected. Severe infections during childhood or puberty, constitutional affections and the like, the age of 25 to 30, also render further development improbable. The outlook is more favorable for the uterus which has passed beyond the infantile stage but is not yet fully developed. It has the shape of the adult uterus, but not its size and weight. General tonic measures are indicated, and, in younger patients, with slight degrees of infantile conditions and hypoplasia, the development of the uterus might be directly stimulated by measures to induce congestion in the pelvic organs. These measures might include the administration of emmenagogues and carbonated or brine baths. The local application of electricity and other mechanical measures is not without danger. The enlargement of the uterus sometimes noted after them is more often pathologic, the result of inflammation induced in the parts. If local measures can do any good they should be restricted, he thinks, to lavage of the uterus and vagina after dilatation of the cervix, and, possibly, introduction of a sound. It must not be forgotten that the dysmenorrhea may be traceable to the ovaries or to conditions in the walls of the uterus or to nervous troubles. Before attempting the above treatment the physician should decide whether the general condition of the genitalia and organism as a whole renders probable the prospects of normal development of a fetus.

70. Prophylactic Filling of Bladder at Operations.—Frankenstein states that postoperative retention of urine is observed at the Kiel clinic in only 3.4 per cent. of the patients now, while it used to occur in 55 per cent. of all the laparotomy patients. He attributes this improvement to the rule of pouring into the bladder a 0.9 per cent. tepid salt solution, with or without the addition of from 10 to 20 c.c. of an emulsion of iodoform. This is done before the abdominal cavity is entirely sutured so that the bladder can be watched as it fills, to determine the individual amount of fluid required. From 350 to 400 c.c. is the average; very rarely is 600 c.c. needed to distend the bladder sufficiently. In the last series of 875 laparotomies postoperative ischuria was observed in 85 cases. In 20 of these patients the pelvis had been drained with tampons which might easily have pressed on the bladder and hindered its functioning. Only 52 patients had this tampon drainage and the ischuria was noticed in 20 of these. In 9 cases spontaneous urination followed removal of the tampon. In 25 of the cases with ischuria there had been preceding inflammatory processes in the vicinity of the bladder. This suggests the possibility of a reflex paresis of the parts. In 12 other cases the urinary functions had been previously disturbed by a tumor or other trouble. In 2 other cases the bladder was not filled until after the peritoneum had been sutured. The filling was not done under direct visual control, and thus probably was not strictly according to the special requirements of the case. The results are less striking in operations by the vaginal route, as visual control is not favored by the exposure of the bladder, while the organ is more liable to be injured during the operation. In his experience, the first urination usually accompanied the first stool. This confirms the analogy between the paresis of bladder and intestines. One of the great advantages of filling the bladder is that it does away with dead spaces in the pelvis, and restores the pelvic organs to their normal position, while it prevents the small intestine from sliding down into the small pelvis. It is an important aid in the Pfannenstiel suprasymphyseal transverse incision. In 62 cases in the clinic an abscess in the abdominal wall followed in only two instances, and both were in tuberculous patients.

Centralblatt f. Chirurgie, Leipsic.

Last indexed XLVI, page 1978.

72 (XXXIII, No. 19.) *Disturbances in Growth After Brief Roentgen Radiation.—Ueber Wachstumsstörungen nach kurzdauernden Roentgenbestrahlungen. K. Förstерling.

73 Ueber schwere Respirations-Störungen infolge medullärer Stovain-Anästhesie (2 cases of serious respiratory disturbances from spinal anesthesia). W. Greiffenhagen.

74 (No. 20.) Fall von Herznaht (suture of heart). Dolcetti (Trieste).

75 *Zur Technik der Gastroenterostomie und Enteroenterostomie. E. Joseph.

76 (No. 21.) Zur Aetiologie der punkt-förmigen Hämorrhagien im Wurmfortsatz (punctate hemorrhages in appendix). Lotheissen. Id. C. Bayer. (First part in No. 17.)

77 Instrumentarium, Technik und Erfolge der epiduralen Injektionen. M. Hirsch (Vienna).

72. Disturbances in Growth After Brief Exposure to Roentgen Rays.—Förstерling exposed 20 dogs and rabbits to the Roentgen rays for a period ranging from five to twenty minutes, at 20 cm. distance, the strength of the radiation much less than those used in therapeutics. He found that a single brief and mild exposure of this kind had a marked effect on the growth of the part thereafter. A normal rabbit weighing about 500 gm. when 50 days old weighs about 860 gm. by the hundredth day. The control rabbits exposed for ten or fifteen minutes weighed only 700 and 460 gm. by the hundredth day. When one side only was exposed the arrest in the development of that side was strikingly apparent. No dermatitis was observed in any instance. The younger the animal the more marked this almost constant inhibiting action on the growth. The findings suggest extreme caution in the use of the rays on young children. They also indicate that the minimum dose causing eventual injury has not yet been determined.

75. Cutting Clamp for Gastroenterostomy and Enteroenterostomy.—Joseph's clamp resembles that put forth by A. Gilbert in 1904. The two long branches are inserted in the parts to be united, and by pressing the branches together the parts are brought into apposition and they are sutured together around the smooth cylinder formed by the closed branches. A knife blade slides back and forth in a groove between the branches, cutting the apposed tissues and thus making the opening of the desired size. The clamp can be applied with great force by the parallelogram arrangement of the base of the branches. The instrument is shown in an illustration.

Centralblatt f. Gynäkologie, Leipsic.

Last indexed XLVI, page 1978.

78 (XXX, No. 19.) *Die Ventralsuspension der verkürzten Ligamenta rotunda als Retroflexions-Operation. H. W. Freund.

79 Zur Kasuistik der Hernia ovarica inguinalis. E. Zurhelle.

80 Zur Frage der Leukocytose post partum bei gleichzeitige Splenektomie. M. Penkert.

81 Zur Retroflexio uteri gravidi partialis. H. Thomson (Odessa).

82 (No. 20.) *Tabes dorsalis und Gravidität. J. Thies.

83 The Magnet in Diagnosis in Gynecology. H. Seilheim. Id. H. W. Freund. (First part in Nos. 11 and 16.) See abstract 53 on page 1569.

84 *Eine neue Operations-Art der künstlichen Vagina (artificial vagina). J. J. Fedorow.

85 (No. 21.) Zur Kasuistik der nervösen Erkrankungen im Puerperium. H. Füth.

86 Zur Vollendung der Geburt bei Beckenendlagen (delivery with pelvic presentation). O. Burge.

87 Extraktion des in partu abgerissenen zurückgebliebenen Kopfes (of detached head). Rühl.

78. **Ventrosuspension of Shortened Round Ligaments for Retroflexion.**—Freund takes up a fold in each round ligament in front of the uterus and then fastens the uterus to the abdominal wall through them. The round ligaments are shortened by the loops taken up in them, but otherwise they are not disturbed and remain in their normal position with normal blood and nerve supply. The uterus is sustained by the ventrofixation although it is not so directly fastened as by the usual technic, on account of the interposed loops of the round ligaments. These loops hold it at about the normal distance from the abdominal wall, and it can enlarge during a subsequent pregnancy without disturbance from its attachment to the wall. The only objection against this combined shortening of the ligaments and fixation of the uterus is that the abdomen has to be opened for the purpose.

82. **Pregnancy in a Tabetic.**—Thies relates the history of a woman in the paralytic stage of tabes who was delivered spontaneously of a viable child. No labor pains were perceived except some pains in the thighs. The delivery and involution of the uterus proceeded apparently normally, with this exception, and the patient was dismissed on the twenty-fifth day with a healthy child. The mother's condition was, on the whole, much better than when she entered the hospital, especially in the subjective sensations. The bladder and rectal disturbances were much less pronounced, and the severe nervous symptoms were materially improved.

84. **Artificial Vagina.**—Fedorow recently operated on a married woman with congenital absence of vagina, uterus and ovaries. His operation was comparatively simple and yet very successful. He constructed the vagina out of the very elastic part of the rectum between the third sphincter and the internal sphincter or ampulla. Resection of the rectum at this point, even to half its circumference, does not interfere with its functioning later. The strip of rectum thus obtained was sutured to the entrance to the vagina, forming an elastic blind passage, lined with mucosa, reinforced with muscle tissue. He worked through an incision in the perineum. The minor details of the technic were similar to those followed by Subbotin in his method of making an artificial urethra in the rectum.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

88 (XXXII, No. 19.) *Eine serodiagnostische Reaktion bei Syphilis. A. Wassermann, A. Neisser and C. Bruck.
89 *Inflammation of Retina and Optic Nerve from Congenital Syphilis.—Ueber Entzündung der Netzhaut und des Sehnerven in Folge von angeborener Lues. J. Hirschberg.
90 Pruritus als Initial-Erscheinung des Herpes zoster. Bettmann.
91 *Zur Behandlung des Morbus Basedowii mit Antithyreoidin Möbius. Heinze.
92 *Resultate der chirurgischen Behandlung der Blasen-Tumoren (of bladder). Treplin.
93 *Calomel Treatment of Myiasis.—Die Fliegenkrankheit und ihre Behandlung. J. A. Roorda Smit (Rotterdam).
94 *Roentgen Photographs in Relief.—Herstellung plastisch wirkender Roentgen-Photographien. G. Schellenberg.

88. **Serodiagnosis of Syphilis.**—Wassermann, Neisser and Bruck have succeeded in producing a serum which gives a specific reaction with syphilitic blood, and also determines the proportion of the antibodies in the blood examined. The reaction is based on the total or partial arrest of the otherwise inevitable destruction of red corpuscles, that is, on the inhibition of hemolysis. It is similar to Wassermann's recent researches in this line in typhoid fever, meningitis and tuberculosis. The prepared serum is made by mixing the inactive serum of monkeys previously treated with syphilitic material from patients, to which is added the complement in the form of fresh normal guinea-pig serum. The mixture is then tested with an inactive specific hemolytic serum and its corresponding red corpuscles to determine whether the added complement is "anchored." When this is the case it becomes evident in the total or partial suspension of hemolysis.

89. **Differentiation of Inflammation of Retina and Optic Nerve in Inherited Lues.**—Hirschberg describes the various points for differentiating the ocular disturbances due to inherited syphilis. He cites some examples to illustrate the remarkably rapid and effectual action of mercurial treatment in puzzling cases.

91. **Treatment of Exophthalmic Goiter with Serum from Thyroidectomized Goats.**—In the 6 cases reported the results of treatment were far from satisfactory.

92. **Results of Surgical Treatment of Bladder Tumors.**—Treplin reviews the ultimate fate of 45 patients with bladder tumors on whom Kümmel has operated during the last 20 years. In 32 the tumor was of the villous form. In 19 it was malignant, and in 6 of these the transformation of an innocent into a malignant growth was more than probable. Malignant recurrence was observed with 3 out of the 12 innocent growths removed. Nine of the 11 tumors that did not exhibit villous characteristics were carcinomas, the others being a sarcoma and a large cyst. Treatment was on the principle that in order to avoid leaving cancer germs behind the bladder wall must be excised into sound tissue, and this can be done only with a high incision. Recurrence was observed with only two of the innocent growths; in one case multiple papillomas recurred four times in the course of twelve years. Only 6 of the 30 patients with malignant tumors are still living after an interval of from seven to sixteen years. One of the tumors in these cases was a spindle-celled sarcoma; the others were forms of villous malignant growth. In one of these cases a third of the entire bladder wall had to be removed. Primary union after resection was favored by the site of the tumors as they were all in the vertex of the bladder. Two patients were cured for nine and twelve months by resection of half the bladder and detachment of one ureter, but they succumbed later to recurrence. An operation is indicated in all cases of malignant bladder tumors. Permanent recovery is sometimes possible, and, in any event, the patient's condition is rendered much more bearable.

93. **Affections Caused by Maggots.**—It occasionally happens that a fly lays its eggs in the skin of a human being or in the nose or ear. Weyenbergh has published a monograph on this subject, and Smit has observed several cases of this myiasis. The prognosis is liable to be grave unless the maggots can be got rid of at once, and he has found that this can be accomplished by covering the part or filling the cavity with calomel. In one case 52 maggots were found in the dressings the day after the application of calomel to the lesions made by the laying of the eggs under the skin and the development of the maggots. In another case a young man was stung inside the nose by a fly. The nose in a few days swarmed with maggots, crawling in and out of the mucosa. Calomel was blown into the nose and 93 maggots crawled out in a day or so. The lesions healed at once.

94. **Roentgen Photographs in Relief.**—Schellenberg states that remarkably lifelike skiagraphs can be made by superposing a positive plate on the negative plate. Films should be used without gelatin on the back. The two films are placed face to face, the photograph on one slightly overlapping that on the other. Still better results can be obtained with removable plates. The picture stands out in relief. The article is illustrated.

Jahrbuch f. Kinderheilkunde, Berlin.

Last indexed XLVI, page 186.

95 (LXIII, No. 5.) *Ueber die therapeutische Verwendung des Tuberkulin im Kindesalter (for children). F. Ganghofner (Prague).
96 *Duodenal Ulcer in Infants.—Duodenal-Geschwür im Säuglingsalter. F. v. Torday (Budapest).
97 Liquor Drinking by School Children.—Alkoholgenusses bei Schülern. R. Hecker (Munich).
98 *Larynx- und Tracheal-Stenosen, mit bes. Berücksichtigung eines durch Thymus-Exstirpation geheilten Falles. F. Theodor.
99 Greater Mortality of Illegitimate Children.—Die Mehrsterblichkeit unehelichen Kinder. S. Rosenfeld (Vienna).

95. **Tuberculin Treatment of Children.**—Ganghofner gives the detailed histories of a dozen tuberculous children under prolonged treatment with "old" tuberculin. His experience has convinced him that it is entirely harmless under the conditions described. As only comparatively few tuberculous children can have the ideal constitutional treatment, he believes that tuberculin treatment should be given a more extended trial. His impressions of the results in 2 cases of pulmonary and laryngeal lesions and in 2 with tuberculous peritonitis were decidedly favorable.

96. **Duodenal Ulcer in Infant.**—The symptoms suggested congenital stenosis in the case reported, but the autopsy at the ninth month revealed a round ulcer in the duodenum.

98. **Tracheal Stenosis.**—Theodor reports what he says is the third case on record of tracheal stenosis caused by hypertrophy of the thymus and cured by removal of that gland. This case was previously reported by Ehrhardt; see abstract in THE JOURNAL, May 19, 1906, page 1568.

Monatsschrift f. Geb. und Gynäkologie, Berlin.

Last indexed XLVI, page 1807.

100 (XXIII, No. 5.) *Tuberkulose und Gravidität. Alf Rosthorn.
101 Steam Cauterization of Uterus.—Zur Frage der Atomocausis uteri. J. Pfannenstiel.
102 *Visual Disturbances at Childbirth.—Ueber Sehstörungen bei der Geburt. S. Bauer.
103 Ueber Endometritis haemorrhagica, mit bes. Berücksichtigung der histologischen Form. L. Goth.
104 *Obstetric Nomenclature.—Geburtshilfliche Nomenclatur. Karl Hennig (Leipsic).

100. **Tuberculosis and Pregnancy.**—Twenty-five women with pulmonary tuberculosis have been encountered by von Rosthorn during the last three years among 1,500 patients at his maternity. The tuberculous affection was decidedly aggravated by the pregnancy in 67 per cent.; in 36 per cent. the rapid aggravation of the objective findings was most striking. In most of the cases the tuberculous affection dated from childhood or puberty, and had recurred during the pregnancy. Spontaneous abortion occurred in 3; 13 of the women bore children at term, generally well developed; 5 were artificially delivered at the third or fourth month. All bore the intervention well. In one instance the benefit was very striking. In two other extremely severe cases premature delivery was induced at the seventh or eighth month, but the patients succumbed a day or two after the delivery, with dyspnea, cyanosis and dysphagia. Analysis of the various cases shows that the gravest prognosis follows long continued fever, even if the rise in temperature is slight, gradual loss of weight, and complication with laryngeal or intestinal tuberculous processes. Prolonged observation of the patient is more instructive than mere physical examination alone. When the process seems to remain restricted to one or both apices, or has cirrhotic characteristics, the outlook is more favorable. The involvement of both superior lobes and of the middle or lower lobes, and the infiltrative forms have a graver outlook, while processes of softening and cavity formation are the most serious. A woman with existing tuberculosis may pass through one or more pregnancies without affecting the tuberculosis unfavorably. Cases are known in which a pregnancy had a surprisingly favorable effect on existing tuberculosis. In many instances girls with a tendency to tuberculosis and with suspicious family antecedents, and even those known to have been actually affected, may grow strong and healthy after marriage. Even women with well-developed pulmonary tuberculous lesions may pass successfully through several pregnancies and bear healthy children, without injury to themselves. Pregnancy seems comparatively safe for tuberculous women whose pulmonary lesions have been stationary for years or are relatively cured, with the objective findings favorable, with or without tubercle bacilli in the sputa, well nourished, free from fever for more than a year, and without hemorrhages. Also for women with more recent but well circumscribed apical processes, without fever, not growing worse during the pregnancy. Pregnancy in a tuberculous woman has a direful outlook under all circumstances in case of florid processes, or when, with even slight objective findings, there is fever that can not be controlled by sanatorium or other treatment. The outlook is also unfavorable when the middle and lower lobes are involved besides the apices and upper lobe, when the pulmonary affection is complicated with an affection of the heart, urogenital system or intestinal tract, and especially with laryngeal phthisis, and when there is a marked family tendency to the disease. The intrauterine transmission of tuberculosis is the exception.

102. **Disturbances in Vision at Childbirth.**—Bauer's patient was a healthy woman who had suffered for three years from headaches, accompanied with nausea during the last three weeks of her pregnancy. Delivery proceeded rapidly and was followed by complete blindness which on the fifth day passed into hemianopsia, with final recovery by the end of the month. Treatment included repose, ice, with tonics for the heart, expectorants and a remedy for insomnia. The eyes appeared normal except for transient edema of the retina, congestion of the veins and slight blanching of the right papilla. There was high fever for nine days, following the onset of severe cerebral symptoms with a complicating endometritis. Considerable albuminuria was noted at first, but it soon subsided. He reviews the scanty literature on the subject of postpartum blindness. In seven instances it was referred to uremic or eclamptic toxins. Seven cases have been reported recently in which the presence of eclampsia without convulsions is discussed as the probable source of the symptom-complex observed. Bauer is inclined to accept this theory as the explanation for his case—all the symptoms and findings suggested the possibility of eclampsia, although no convulsions were observed. The blindness and its transition into hemianopsia were probably due, he thinks, to a toxic paralysis of the central optic nerve tracts, affecting later the right hemisphere alone.

104. **Obstetric Nomenclature.**—Karl Hennig of Leipsic has elaborated a nomenclature for obstetrics in Latin, English, Greek, French, German and Italian. It is presented in six parallel columns, one for each language. Some of the English terms are rather surprising, as, for instance, embryotomy—"breaking up the child;" adherent placenta—"joined placenta;" dressing forceps—"curved pinces;" the blunt hook—"crotchett;" cephalotomy—"cephalic carve." The list, he states, is offered merely as a suggestion, a foundation on which a suitable structure can be built. Hennig seems to be perfectly at home in all languages except the English.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE EYE AND NERVOUS SYSTEM, Their Diagnostic Relations. By Various Authors. Edited by W. C. Posey, A. B., M.D., Professor of Ophthalmology in the Philadelphia Polyclinic; Surgeon to the Wills Eye Hospital, etc., and W. G. Spiller, M.D., Professor of Neuropathology and Associate Professor of Neurology in the University of Pennsylvania, etc. Illustrated. Cloth. Pp. 988. Price, $6.00. Philadelphia: J. B. Lippincott Company.

GOLDEN RULES OF SURGERY, Aphorisms, Observations and Reflections on the Science and Art of Surgery, Being a Guide for Surgeons and Those Who Would Become Surgeons. By A. C. Bernays, A.M., M.D., Life Member of the German Society for Surgery of Berlin, Chief Surgeon Lutheran Hospital, etc. Cloth. Pp. 232. Price, $6.00. St. Louis: The C. V. Mosby Medical Book Co., 1906.

CATARRHAL FEVERS, Commonly Called Colds, Their Causes, Consequences, Control, and Cure. By R. P. White, M.D., Ed., M.R.C.S., Life Vice-President and Honorary Medical Officer, Royal Albert Edward Infirmary. Cloth. Pp. 111. Price, $1.60. Philadelphia: P. Blakiston's Son & Co., 1906.

SECOND ANNUAL REPORT OF THE HENRY PHIPPS INSTITUTE FOR THE STUDY, TREATMENT AND PREVENTION OF TUBERCULOSIS. An account of the Work of the Second Year, a Review of the Subject of Immunization in Tuberculosis, etc. Paper. Pp. 452. Philadelphia: Henry Phipps Institute, 1906.

DIE KRANKHEITEN DER ERSTEN LEBENSTAGE. von Dr. Max Runge, ord. Professor der Geburtshilfe und Gynäkologie, Direktor der Frauenklinik an der Universitat Gottingen. Dritte Umgearbeitete Auflage. Paper. Pp. 386. Stuttgart: Verlag von Ferdinand Enke, 1906.

NINETEENTH ANNUAL REPORT OF THE BOARD OF MANAGERS OF ST. LAWRENCE STATE HOSPITAL, Ogdensburg, N. Y., to the State Commission in Lunacy for the Year Ending Sept. 30, 1905. Paper. Pp. 48. Albany, N. Y.: Brandow Printing Company, 1906.

THIRTY-SECOND ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH OF THE STATE OF MICHIGAN for the Fiscal Year Ending June 30, 1904. Cloth. Pp. 221. Lansing, Mich.: Wynkoop Hallenbeck Crawford Co., 1905.

A NURSE'S HAND-BOOK OF MEDICINE. By J. N. Henry, M.D., Clinical Professor of Medicine, Woman's Medical College of Pennsylvania. Cloth. Pp. 268. Price, $1.50. Philadelphia: J. B. Lippincott Company, 1906.

FIRST ANNUAL REPORT OF THE STATE DAIRY COMMISSIONER TO THE GOVERNOR OF THE STATE OF MISSOURI. R. M. Washburn, State Dairy Commissioner. Cloth. Pp. 95. Jefferson City, Mo.: Hugh Stephens Printing Company.

THE TEETH AND THEIR CARE. By T. F. Hyatt, D.D.S., Member Second District Dental Society of the State of New York. Cloth. Pp. 43. Price, 50c. Brooklyn, N. Y.: King Press, 1905.

GREEN'S ENCYCLOPEDIA AND DICTIONARY OF MEDICINE AND SURGERY. Vol. I. AAC-BRA. Cloth. Pp. 538. London, England: William Green & Sons.

EIGHTH ANNUAL REPORT OF THE FREE HOSPITAL FOR POOR CONSUMPTIVES, March 1, 1905, to Feb. 28, 1906. Paper. Pp. 56.